
UNIT 1 SPACE

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Learning Objectives



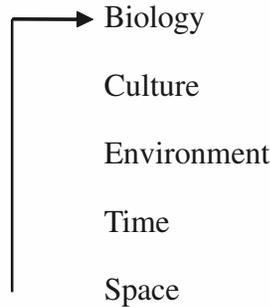
Once you have studied this unit, you should be able to:

- define and identify the different types of archaeological site;
- understand techniques that archaeologists use to interpret the function of the site;

- understand methods used to study the relationship between people and environment; and
- understand the formation of site and its abandonment.

1.1 INTRODUCTION

Over time and space within different ecological environment one can witness the biological and cultural evolution of early man. The following aspects are involved in this statement and they are studied in Archaeological Anthropology.



Out of these 'space' is an important aspect for studying the distribution of man in different ecological setup in relation to surrounding environment. Space has been utilised for settlement, economic resources, and cultural activities. Archaeologists study prehistoric subsistence pattern on the basis of artifacts with various technologies that people developed to adapt to their environment. Cultural ecology is a theoretical framework for studying the interrelationship between people and their environment. Environmental approach includes both natural and social environment. In the study of prehistoric settlement pattern, technology and subsistence have leading role.

Today settlements usually mean cities, town and villages. However, these types of settlement pattern are absent in Prehistoric period. First man was mobile rather than sedentary. He created temporary camps and sites for processing raw materials and in search of food. Cave and rock shelter were often used for occupation.

In outlining an archaeological site, different types of sites as the spatial units are important in the context of the present study unit. One can understand the importance of studying archaeological sites, their distribution and differentiation in terms of time and space in cultural frame of archaeology.

1.2 ARCHAEOLOGICAL SITE: DEFINITION AND CLASSIFICATION

A 'Site' or precisely an archaeological site is any kind of place, large or small, where there are traces of human occupation or his activity found available. Archaeological sites consist essentially of activity areas that comprise material cultural objects like tools and remains of food in the form of rubbish dump. Sites do not remain intact rather they change in course of time either through repeated occupation of man and due to impact of various natural agencies. They however remain intact on many occasion after the site is discarded and abandonment.

Sites are discovered in course of exploration upon the occurrence of stone artifact. Their sizes range in size from a spot, larger with scatter of hunter-gatherer artifacts

to large city. Innumerable sites developed owing to the migratory habit of early man, and many of them are not yet discovered. Smaller and bigger sites reveal the duration of time or length of occupational time. For example Mesopotamian occupation mounds were re-occupied again and again for hundreds and thousands of years and its remains are discovered from a number of stratified layers. In contrast the occupation site may contain scatters of potsherds or stone tools or occupation layer buried under top soil. Archaeological sites may consist of an association of assemblages of artifacts or series of assemblages stratified one above another.

A person could hardly comprehend prehistory if he regarded each of the site as an unique one; archaeologists therefore customarily group sites into convenient categories. A reader working for the purpose of a general work on archaeology will see reference in a book on Prehistory or Archaeology with different nomenclature like Paleolithic sites, early Bronze Age sites and Iron Age; however there will be sites like Cave Site, Sites on the River Valleys, Sites on the edges of Lakes, lagoon and sea or in desert environment. Here the first category of sites speaks about a cultural orientation and the later are described on their spatial distribution.

1.2.1 Classifying Sites

Archaeological sites can be classified in the following ways:

1.2.1.1 By Artifact Content

The association, assemblages, and sub assemblages of artifacts in the sites are used to label it as Stone Age, Chalcolithic or Iron Age and so on. Thus the particular site can be labeled according to its specific artifacts content: stone tools, milling stones, pottery and some metal artifacts. On the other hand the sub assemblages recovered from the site reflect individual human behaviour, sites can be classified by the characteristic pattern of the artifacts found in them such as burial sites, kill or butchering sites, quarry site and habitation site.

1.2.1.2 By Geographic/Geological Location

Many human settlements are well defined types associated to various geographic locations, and these sites can be referred as open sites, lakeside sites, cave sites, valley sites, foothill sites, and so on.

The above mentioned sites could be expanded, but none of them can singly account for all the possible kinds of sites. The study of all kinds of sites is relevant to a particular objective pertaining to any research to give a holistic picture of the social system operative in prehistory. Therefore it is meaningless to attribute that some kinds of sites are of more value than others. It is fairer to attribute that some kinds of sites yield a greater range of information than do the others, and that consequently, these are the sites most often studied.

1.2.2 Kind of Sites

A site is a place where traces of ancient occupation and activity are available. The presence of artifacts is the clue to a site. The number and variety of prehistoric sites are limited only by the activities of prehistoric men who lived and left their traces on the Earth. Each site is not unique and therefore archaeologists classify

sites into categories. These sites have been classified by artifacts type such as stone tools. The activity is represented by the remains, such as, kill site, camp site, and quarry site. Finally the site is referred to the geo-archaeological context, such as, stratified, non stratified or surface finds.

1.2.2.1 Living or Habitation Site

Habitation sites are the most important sites because people have lived and carried out a multitude of activities at the place. The most commonly excavated sites are the places where people lived and these sites were a focal point of prehistoric activities. All archaeological sites imply habitation though it may have been for relatively short time period. A habitation site is one around which a group of people centered their daily activities. The artifacts in living sites reflect domestic activities such as food production. Habitation sites that were occupied the year round frequently have the remains of houses, but dwellings may be caves or rock shelters or even open area in which no trace of a permanent shelter remains. Seasonally occupied sites generally have fewer traces of architecture. Prehistoric men found shelter in various sorts of constructions ranging from temporary windbreaks, lean-tos to semi sub-terranean house made of logs and earth that could be lived in year after year, mud brick or rough masonry houses etc. In areas where shelters were not needed, habitation sites may be seen with the remains of fire and scatter of refuse and artifacts. In prehistoric sites an arc shaped pile of stones, which perhaps served as the floor or foundation of a windbreak, has been discovered in Olduvai Gorge, Tanzania, by L.S. B Leakey.

The prehistoric caves are hollow carved in the rocks by natural agencies such as wind and ground water. They are generally found in the lime stone formation. Evidence of cave shelter has been found in Kurnool district of Andhra Pradesh. A rock shelter differs from a cave in having an overhanging rocks and almost open sides. Hundreds of rock shelters have been found from vindhyan sand stone area of Madhypradesh.

The open camp sites or open air sites are mainly found in the open or near the bank of the lakes, streams and ponds. It is a living site because people lived or camped for a certain time period. The site Langhnaj is a good example of a camp on a dune near a Lake and Bagor is the example of open camp beside River site.

Sites that are ordinarily close to settlements are agricultural fields and terrace, irrigation canals, roads, bridges, aqueducts, and cemeteries. Occasionally habitation sites served the dual purpose of dwelling and defense, although defensive structures are relatively rare in prehistoric times.

1.2.2.2 Trading Centres

A number of trading sites has been reported form a few places, though it is difficult to recognise them with certainty. Sites centrally situated between the Maya and Aztec areas have been identified as ports of trade, though of course they were habitation sites as well. The site Lothal in Indus area is also of the same type. Archeologists have found a site on non arable land that was favorably placed for the salt and obsidian trade in Turkey. Pathways across open ground or roads such as the Roman roads of Britain and Inca highways are distinguished features related to trade. Teotihuacan near Mexico City is the great prehistoric

metropolis which covers about 20 square kilometers with a population estimated as high as 125,000 persons. There are certain groups of buildings where foreign pottery is abundant and the archaeologists think that merchants from the Gulf Coast, Yucatan, and Oaxaca may have lived in the area.

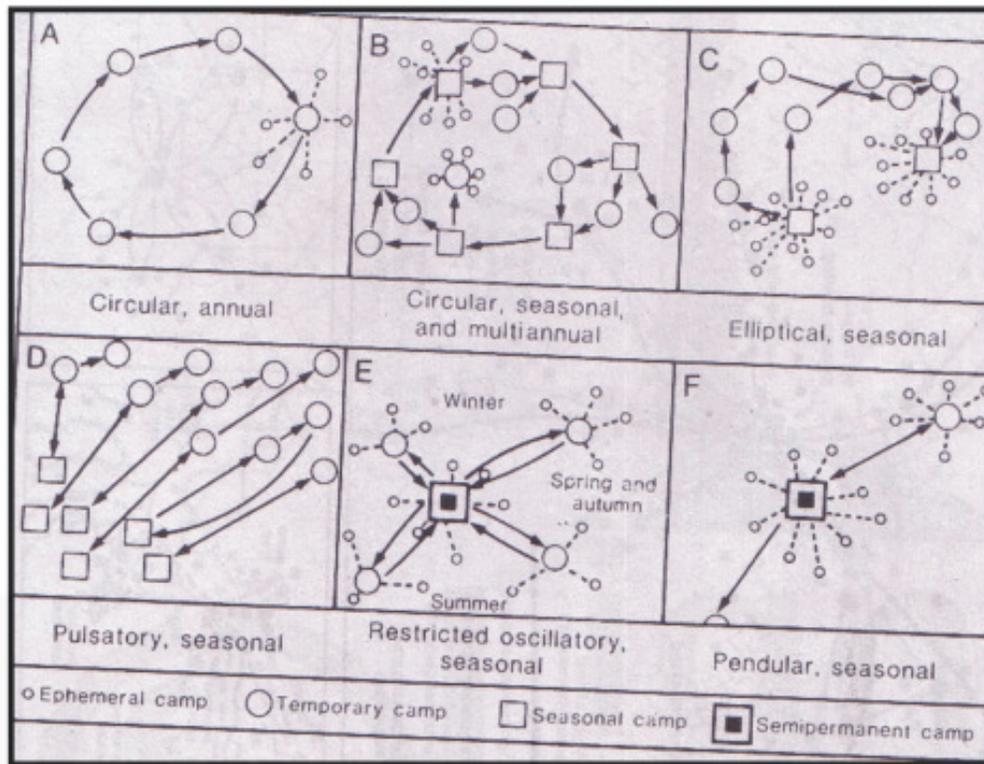


Fig. 1.1: Different Types of Camp (Fagan, 1991)

1.2.2.3 Quarry Sites

In archaeological terms, a quarry or mine site is where there were evidences of material, such as, stone or metal ore were mined for use as building material or for tool manufacture. Quarries are interesting to archaeologists, because the sources of raw materials found on archaeological sites help to know trade networks of prehistoric and protohistoric people. Evidence at a quarry might also show available technology in the form of tools left behind and cut marks in the walls of the excavation pits.

Sites in which a great variety of minerals were mined are common throughout the world although only a few of them were excavated. The presence of special tools needed for mining copper, obsidian and other metals are important for identifying quarry sites. Mining for metal ores also indicate a sites. Archaeologists have uncovered the bones, and sometimes the bodies, of miners who were crushed by falling rocks. Quarry sites may be workshop areas where ores were smelted, flints were chipped, or soapstone was worked into bowls. Analysis of raw material form quarry sites help to get to know which of the particular product was mined. A study of the distribution of finished stone artifacts may tell the archaeologist a great deal about ancient trade relations in particular stones. For example Petrological analysis of British stone axes of the Neolithic and Bronze Ages and of the determination by trace element studies of obsidian and copper in the Near East indicate the areas from where those were imported.

In 1990, a team of archaeologists of Banaras Hindu University supervised by P.C. Pant and Vidula Jayswal noticed evidence of ancient stone quarries, including many large cylindrical blocks in the nearby Chunar hills. Over 450 ancient quarry sites were identified in an area of 15 sq. km. This was done on the basis of marks of extraction of stone blocks, chiseling debris, cylindrical blocks and count marks of the number of finished blocks.

1.2.2.4 Kill Sites

Kill sites are places where prehistoric people killed games and camped around while butchering the meat. They are relatively common on the Great Plains. It is common in the United States to find kill sites, places where one or more animals were killed by hunters, some of whom may have had no permanent dwellings. At kill sites archaeologists find the bones of the animals, projectile points used for killing them, and the tools for butchering. In some cases where the bone materials has been well preserved the pattern of butchering the animals can be reconstructed. At Olduvai one such site is found.

Outside the Americas it is less common to find kill sites, though certain remains from the Acheulian and later periods, situated at the edges of rivers and lakes must have been combination of kill and habitation sites. Those hunters usually have a home base from which they wander in pursuit of game and often bring back only the edible portion of butchered animals. The amount of bone and stone tools in these sites suggests seasonal or perhaps permanent year round camps. Archaeologist usually calls these sites “living floors”. Frequently a fireplace is found in which the meat was cooked.

1.2.2.5 Factory Sites

Factory site is a site where men manufacture tools. These sites are generally located near the sources of raw material. Numerous factory sites have been discovered in India. Example of Lower Palaeolithic factory sites is Chirki on the valley of the river Pravara, Gangapur on the river Godavari, Chitor in Rajasthan. Several factory sites were also used by man as camp sites or living sites. The raw materials, finished and unfinished tools, debitage are the indicator of factory site.

1.2.2.6 Ceremonial Sites

Ceremonial site may or may not be integral to a living site. Mayan ceremonial sites, such as Tikal were surrounded by habitation areas. Ceremonial sites include the imposing megalithic construction at Stonehenge. Ceremonial sites are found in much older caves in France and Spain where remarkable paintings, carvings, and reliefs are found. Ordinarily, however, there are no dwellings other than those of political or religious officials and their retainers within the area of a ceremonial site. For example, La Venta, a large Meso American ceremonial center, was erected some distance away from the area where general population lived.

1.2.2.7 Burial Sites

Burial sites are mostly those sites where the dead bodies are ceremonially buried. Burial sites include both cemeteries and isolated tombs. People have been burying their dead since at least 100,000 years ago and have often taken enormous pains to prepare them for the afterlife. The most famous burial sites of all are the pyramids of Giza in Egypt. Archaeologists concentrate their efforts on cemeteries because they often contain useful information about social practices. Burial sites range from isolated burials in shallow holes to elaborate masonry construction, earth mounds, and megalithic monuments. At the classic Maya site of Palenque in the state of Chiapas, Mexico, the pyramid and temple of the inscriptions were built over a great burial chamber, and subsequently several other examples of tombs in the pyramids have been found. Many burials are associated with special grave furniture, jewelry and ornaments of rank.

Burials may also be found in the garbage dumps of large villages; they may be under the floors of houses; or they may occur singly, away from habitation sites. At times certain cemeteries, or sections of a cemetery, may have been reserved for persons of one sex or age or social rank. Usually, however, cemeteries contain a sample of the whole population that died in the period of the cemetery's use. Examples of special cemeteries are those for children in Pennsylvania; separate cemeteries for men in the Desert field in upper Austria, where special areas were reserved for children, for victims of epidemics, and for persons belonging to "an elevated social group". Disposal of human bodies may also involve the discard of artifacts with the body. These grave goods are extremely valuable to archaeologists for reconstruction of prehistoric ways of life and death.

1.2.3 Primary and Secondary Sites

The site may be either primary, if people have deposited their own remains there or secondary, if the remains have been re-deposited by another person or by natural agency. Any other human disturbance of the ground might result in elements of the site being moved around and re-deposited. For example a primary deposit on a river terrace has been bulldozed into another part of the terrace; the place of re-deposition is a secondary site.

1.2.4 Importance of Primary Sites

A primary site may either be disturbed or not disturbed. The living sites are mainly primary sites. If at a site the evidence of cultural material left behind by man is found in an undisturbed or original deposition or in *in-situ* position it is a primary site. The material remains recovered from these sites provide valuable information about the life of the people who lived there as well as about their surroundings. The present trend in India is more towards exploring and excavating the primary or the living sites. The contents of a primary site comprise both natural and human deposits. The natural deposits consist of materials laid down by water, wind or other geological agencies. The human deposits cover the animal deposition and material culture.

Kind of deposition			Natural deposition	Human deposition	
Deposits made by geological agencies			Water and wind-laid materials	—————	
Deposition made by occupants of the site	1.2.3 1.2.3 1.2.3 1.2.3 Products of the occupants activities	Raw materials	Material brought by animals for their own consumption	Material brought by man for his own consumption	Cultural remains
		Processed Materials	Material prepared by animals for their own consumption, including by-products	Material prepared by man for their own consumption, including by-products	
		Unworked equipment	Structures, tools, etc. used by animal in their natural state	Structures, tools, etc. used by animal in their natural state	
		Worked equipments	Structures, tools, etc. manufactured by animal in their natural state	Structures, tools, etc. manufactured by man in their natural state	
	The occupants themselves		Remains of the animals and of plant occupants	Morphological remains of the human occupants	

Fig. 1.2: Contents of primary site (Rouse 1972)

1.2.4.1 Abandonment of a Site

At some stage in the life of an activity area a settlement may be abandoned. All features of site, such as pits, buildings, roads would be abandoned but also a range of artifacts. Once a site has been abandoned other communities in the area may see it as useful local resources of firewood or building materials. The site could be leveled further for new buildings and cut away to make terraces for new houses or agriculture.

1.3 FORMATION OF SITE

Two questions arise, “How a site is made?” and “How do you know where to look for sites?” These are important for the Archaeologist. In principle, the answer to both questions is easy although a little explanation and illustration are required.

Sites are the result of human activity. It is not always very easy to recognise the prehistoric sites though understanding of the pyramids and mounds that were built as tombs and memorials to the dead are rather easy. The condition of the site and depth of the findings are important aspects. This depends on the formation of the site. It is basically a geological process. Natural agencies are important factors for formation and transformation of site.

In case of caves and rock shelters continued occupation over thousands of years left a layered deposit of debris some tens of feet in depth. The accumulation of debris in caves thus can be explained as the joint result of man and natural processes. As for example family moving into a cave might bring in some branches of grass to cover the damp, hard floor where they wanted to sit and sleep and some rocks to sit on. They would bring in wood and branches to build fires. The hunters would kill animals and bring their dead bodies into the cave and when they had finished their meals they would throw the bones to one side. As natural erosion of the cave or rock shelter took place, bits of rock and dirt would flake

off the ceiling. Sometimes a major rock fall would bury the whole floor. Wind might add appreciable quantities of fine soil over long periods of time, and water-carried sediments might also add to the filling process. If occupation together with natural events continued for thousands of years, the cave might finally be filled to its top.

The great mounds (tells) that have accumulated in some parts of the world, especially in the Near East, represent an example which shows that natural processes have done more to take away than to add material. At Ur in Mesopotamia, Woolley dug more than 90 feet to reach the base of the great mound. These mounds occur in parts of the world where the chief building material is mud. The people make bricks both of sun dried mud and fired bricks they laid poles across them to form a roof on which they pile brush or matting, and cover them with a thick layer of mud. It is practically impervious in these arid regions where there is little rainfall. Despite the low rainfall and consequent slow rate of erosion, the houses do deteriorate and eventually become unsafe for continuous use. Then thrifty villagers scavenge the scarce poles used in the roof and reuse them in new structure. After this, the bare walls standing there against the wind and rain rapidly disintegrate and eventually leave a featureless mound where the old house stood. After some time new houses are often built on the same location, frequently several feet higher than the original house. One may wonder why people as they customarily do in the Near East – chose to build on top of old houses rather than pick a spot on level land. The reasons seem to be that, with agricultural fields beginning at the edges of the settlements, there was no room to expand, and often defensive walls were built around the towns.

The practice of building mounds by the deliberate heaping up of dirt or stone, the practice of building mounds on which to place houses, public buildings, and temples was common in the eastern United States as well as in Meso –America. Indians in the upper Mississippi Valley region of the United States often made mounds for the purpose of burial, some of them being in the form of animals, birds and serpents.

For a variety of reasons some locations are more attractive than others, and these spots may be continuously occupied or frequently reoccupied. A common cause of the successive use of the same spot may lie in its presumed religious sanctity. Often a shrine or church existed there, and later peoples may have lived. Perhaps they belonged to a different religion and took advantage of the same site to build their religious structure. In Europe the great cathedrals stand on the sites of pre Christian shrines or temples.

1.4 RECOGNISING AND FINDING ARCHAEOLOGICAL SITE

A wide variety of techniques, ranging from walking, to aerial photography to magnetic prospecting, can be used to find sites. Fortunate discovery of sites are a bit advantageous and are sometime can alter the general course of information.

1.4.1 Approaches for the Archaeologists

At the beginning to find sites in certain areas, an archaeologist must first familiarise himself with the landscape and its potential for supporting different

kinds of human activities. It is helpful also to have some general idea about the kinds of sites that are likely to be found. For example, a person would normally look in somewhat different places for sites of hunters and for sites of farmers, hunters usually lived in relatively small camps and moved regularly in pursuit of game. Such sites as they did occupy would have been in places where water, game, and perhaps fuel could be obtained. Farmers, by contrast, ordinarily live in permanent settlements and chose their sites with an eye toward arable land.

Archaeologists can then survey the landscape for suitable places on the basis of this knowledge. Hills, grass grows, trees, and the location of sources of water are the important indicator of finding the site. An unnatural contour of a hill, an unusual kind of vegetation, soil, differing in color from that of the surrounding area, is all clues to sites. If the grass grows more luxuriantly in the outlines of a rectangle, it may mark the borders of an ancient ditch or house, and occasionally the walls of houses may be exposed on the surface.

1.4.2 Finding Archeological Sites

The following criteria are chosen to locate a site. They are based either on documentary evidence or on the basis of certain ways and means formulated for the purpose of locating a site.

1.4.2.1 Existing Knowledge

Many archaeological sites have never been lost. The site may have been abandoned but it may remain clearly visible in the landscape. It was not considered an archaeological site as such. Classic sites like Stonehenge, the Great Wall of China, or the Acropolis of Athens have always been known. There are many sites which are known to local people like the lost civilization of Chandraketugarh where the local people retain a major source of information about sites known to them, even if this knowledge has not reached the archaeological record.

1.4.2.2 Documents

Archaeologist working in historic periods will use documents as one of their main sources for the location of archaeological sites. Documents must, however, always be treated with caution. The initial reason for the production of the document must always be considered, and whether the absence of information is simply because relevant documents have been lost.

Maps are perhaps one of the most important types of document to aid in the location of sites. Earlier maps may locate countries, towns, villages and major natural features.

1.4.2.3 Aerial Photography

Aerial photography is the earliest and perhaps still the most important, remote sensing tool available to archaeologist searching for new archeological sites. Remote sensing involves any techniques which capture geographic data by sensors at some distance from the surface being recorded. The main elements of remote sensing are aerial photography, satellite images and geophysics. All data gathered through remote sensing can be separated, combined, and manipulated through the activity of image processing, which forms one of the key elements of geographic information system (GIS).

Any site with humps and bumps, like banks or ditches, has the potential to show as a shadow site. Crop marks often produce the most dramatic aerial photographs. Crop marks are basically the result of differential speed and quality of crop growth and ripening, depending on sub-surface conditions. Essentially if the soil is deeper in one spot in the field, the crop above will have access to more nutrients and moisture than crops above shallow soil. Crops above a ditch or pit for example will grow more rapidly and strongly, be taller, and ripen more slowly than those above a wall or floor, which are likely to be weaker, shorter, and ripen more rapidly. Crops above deeper soils will produce positive crop marks, while those above shallow soils will produce negative crop marks.

1.4.2.4 Ground Survey

Archeological sites may also be found by systematic ground survey. This can be approached in a variety of ways, depending on the aims of the survey and the available time and money. Geophysical survey techniques are part of the battery of remote sensing techniques which include aerial photography and satellite images. Like all remote sensing techniques, geophysical surveying is a non – destructive method of site investigation, so has obvious advantages over excavation when dealing with the finite archaeological resources. Resistivity survey of the soil provides some clue to subsurface features on archaeological sites. Magnetic survey is used to find burial features such as iron objects, fired clay furnace, pottery kilns, hearths and pits filled with rubbish or softer soil.

Beside these, exploration by foot is an age old method of finding archaeological site.

1.5 CONTEXT SPECIFIC OF SITE

Settlement Archaeology includes the study of both permanent and temporary interaction of humans with surrounding geophysical setting in order to understand, how they are adapted to it. Archaeologists also try to understand the ways in which the people in the past understood their surrounding landscape through some ideas; initially conducive to live in and availability of food and water were the two primary considerations, and towards the ancient historic time, ownership, territory and status were given specific consideration. The settlement archaeology mainly focuses the placing of structures or other features within a settlement. Artifacts and ecofacts are used for studying the distribution of past activities of man. In Prehistory different sites have been found such as habitational sites, ceremonial sites, hill sites, graves, trading centers and camp. Looking at the modern world there is diversity among the settlements such as primary manufacturing centers, market town, suburbs or rural hamlet, centre of transportation, fishing and agriculture. If we consider the specialised functions of prehistoric sites firstly there is a conception of how people live and behave. It also can be studied by ethnography, study of contemporary people and the modern primitive communities. One group of people may use a number of sites that have different specialised functions. Hunters frequently observed game mainly from forest, religious activities are often carried out in sacred places and interior territories (rural or villages) in winter may be placed for protection from wind with the availability of fuel. Summer camps are selected at places which might have been more comfortable than other parts of the territory. Manufacturing of artifacts depend on the sources of raw materials. In modern times, most of the

people are permanently settled at a place where rapid and efficient transportation and communication are available compared to total inconvenience of early man who moved like animal in a forest environment.

The second function may examine the content of the sites. Sometimes caves were used as base camp and rock shelters served as a butchering station. In the absence of domestic refuges with the geographic context specific use of the site could be inferred.

1.6 SPATIAL UNIT: AREA AND REGION

The spatial units have been referred to thus far are all confined to the boundaries of one community. They reflect the activities of the maximum number of people who occupied the settlement at some time. Prehistorians seek to understand the wider scale though archaeological research was carried out on single site. Several communities or a scattered population living in a well defined region may be linked to same subsistence or settlement system. Culture behaviour is identified by patterning the ancient assemblages with background of geographical and environmental data in a particular settlement and across the settlement.

A number of spatial units are in common use.

1.6.1 Archaeological Culture

Culture is consistent patterning of assemblages, the archaeological equivalents of human societies. Archaeological culture is the reflection of material remains of human culture preserved at a specific space and time at several sites.

1.6.2 Culture Areas

It is a large geographical area in which characteristic of an archaeological culture exist in the context of time and space. For example Mayan cultural system and Mayan culture area.

1.6.3 Archaeological Regions

This is generally described as well defined geographic areas bounded by geographic features, such as oceans, lakes or mountains. The ecological and cultural boundaries throughout prehistoric times also have been considered.

Regional approaches involve comparison of artifacts from a few scattered settlements. This is based on a research strategy sampling the entire region and reconstructs of many more aspects of prehistoric life than those uncovered at a single site.

1.7 SETTLEMENT ARCHAEOLOGY

Settlement archaeology is the study of changing human settlement pattern and interaction of people and their external environment, both natural and cultural. The layout of the human settlement on the landscape, are the result of relationship between people who decided to place their houses, settlement and religious structure on the basis of political, economic and social considerations. Settlement archaeology reflects the society and its technological adaptation to the specific

environment on the one hand and trading relationship, exploitation and social organisation on the other hand.

1.7.1 Determinants of Settlement Patterns

Settlement patterns are determined by many factors related to the environment, economic practices and technological skill. For example the distribution of San camp in the Kalahari Desert depends on the availability of water supplies and vegetable foods. Village lay out also reflect the idea about the need to protect from predators or war parties.

The determinants of settlement patterns operated on at least three levels each is formed by a number of factors as below.

- 1) **Building or structure:** Houses, household cluster and activity are units of archaeological analysis.
- 2) **Communities:** The arrangement of structures within a single group constitutes a community. The community is defined as a maximal group of persons who normally reside in face to face association.
- 3) **Distribution of communities:** The density and distribution of communities, whatever their size is determined to a considerable extent by the natural resources in their environment and by the economy, nutritional requirements and technological level of the population as well as by socio religious constrains.

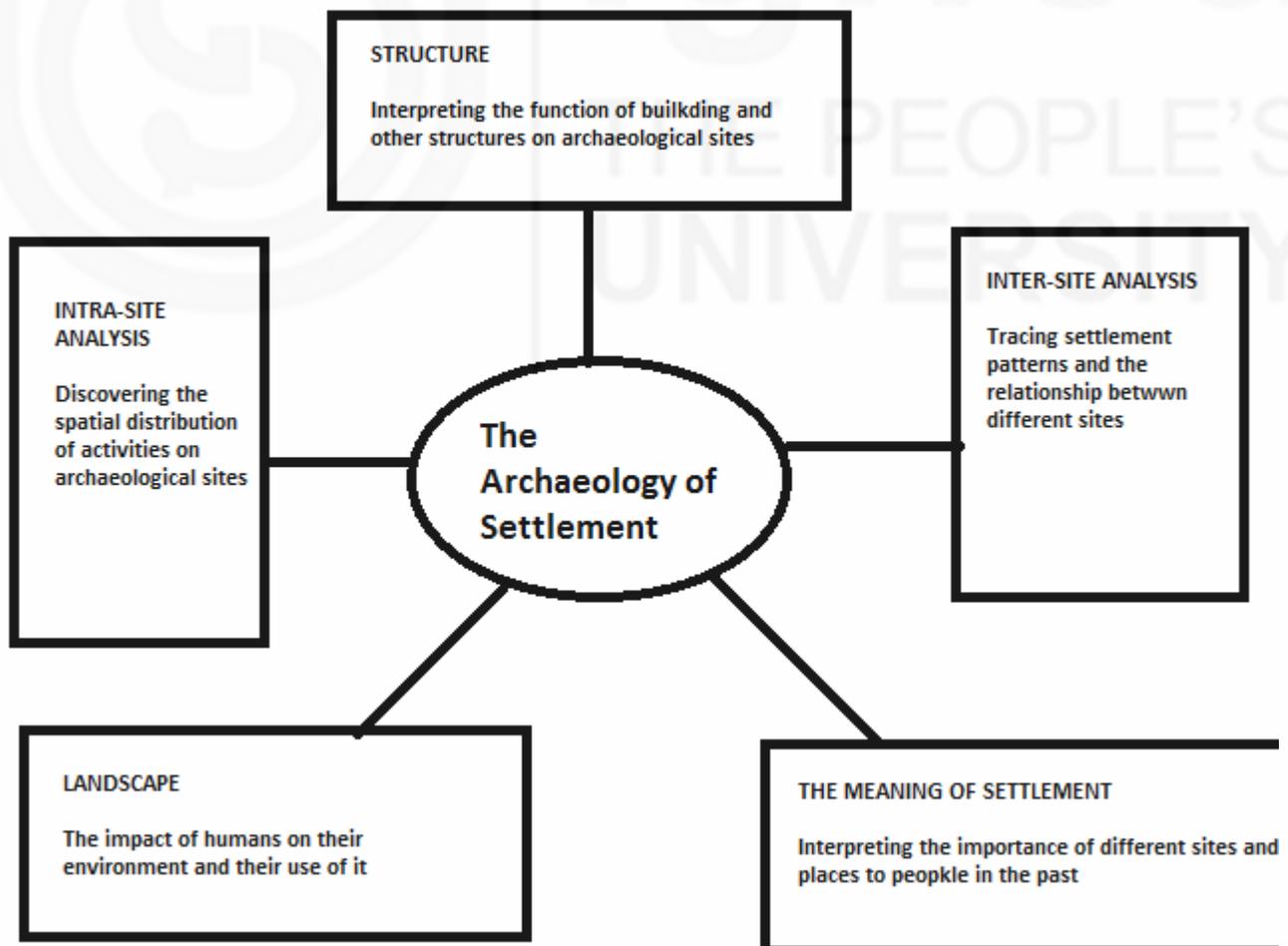


Fig. 1.3: The Archaeology of Settlement (Grant et.al 2007)

1.7.2 Hunter-Gatherer Sites

Karl Butzer (1982) studied the Lower Paleolithic Acheulian sites of Ambrona and Torralba in Central Spain. He argued that early hunter gatherers shared the ability of large grazing animal to adopt different feeding habits and seasonal movement according to the abundance of resources through the year. Ambrona and Torralba lie along the only low latitude mountain pass dividing the plains of Castile. This was the route through which the large mammals migrated in spring and fall from winter to summer pastures and back again. The Acheulian people hunt these animals. During other season of the year they spread over the neighbouring country in temporary camps near water and constantly moving herds.

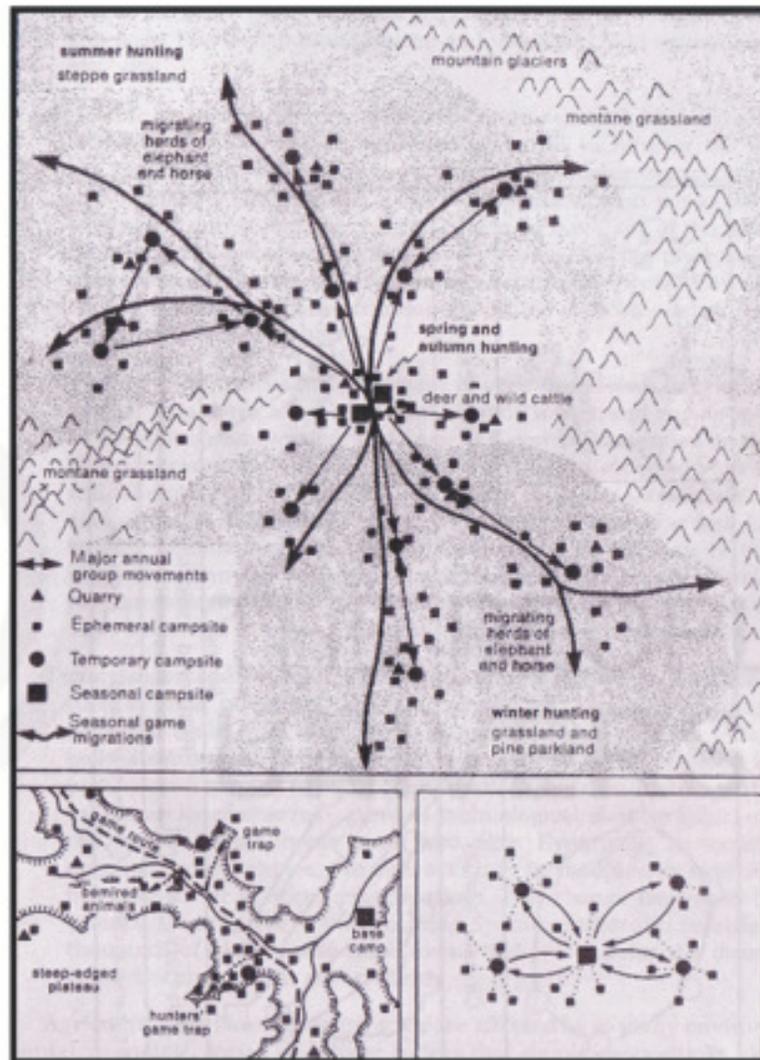


Fig. 1.4: A seasonal mobility models for Achulian hunter-gatherers in central Spain based on the data from Ambrona and Torralba. During spring the hunters preyed through the mountain passes and in summer and winter they divided into small group and lived in temporary sites near water and stone outcrop. (Butzer, 1982)

The Jarawa is an ancient Negroid tribe and live on the Andaman islands. This nomadic tribe continue to be hunting and gathering one. Jarawas hunt wild pig, monitor lizard with bows and arrows.

1.7.3 Agricultural Settlement

The clustering and patterning of agricultural settlement are affected by cultural and environmental factors combined.

Distribution of economic resources such as different types of land with separate pasture land, cultivation and so on affects the settlement pattern. Soil distribution, texture, depth, sub soil are important factors. The earliest European farmers concentrated on well drained easily dug soils because they did not use heavy plough.

Available technology, land clearance technique, available transport, crop types exploited and other factors within site are also responsible for clustering.

Topography influences the placement of agricultural sites in relation to their neighbours, affected direction of trade routes and encourages or inhibits communication. The ancient Egyptian depended on the Nile for transportation and water and the present successors still do the same.

Trade network play a leading role in the emergence of central places in great cities.

Agricultural settlements are affected by so many environmental, economic, social and other factors. Agricultural settlements were far more dependent on one another than those of hunter-gatherer.

1.8 SUMMARY

The basic concept used by archaeologists in recovering remains is that of site, by which it is meant any place in which archaeological remains have been found. Archaeologists study different types of ancient sites which include primary and secondary as well as permanent and temporary sites. The interaction of human with their landscape is studied in order to understand how people adapt to it. Human impacts on the landscape from the forest clearance to the division by boundaries into territory are important parts of settlement study. Understanding of landscape through ideas such as ownership, territory and status by people are great concern to the archaeologists. For this study they need to identify the spatial distribution of past human activities, understanding of the location of the sites within a landscape or the placing of structures and other features within a settlement. Artifacts, ecofacts and features are the key evidence base in studying of distribution of ancient activities. Archaeological sites usually form through human-related processes but can be subject to natural, post-depositional factors. Cultural remnants which have been buried by sediments are in many environments more likely to be preserved than exposed cultural remnants. The study of archaeological site is a multidisciplinary approach. Experts of physical and natural sciences, anthropologists, archaeologist, geologists and geographers have to involve for proper understanding of a site. Many sites are the subject of ongoing excavation or investigation but the study of prehistoric sites are rather scanty.

Suggested Reading

Butzer, Karl W. 1964. *Environment and Archaeology*. Chicago: Aldine Publishing Company.

Drewett, Peter. L. 2003. *Field Archaeology*. London: Rutledge.

Fagan, Brian M. 1991. *In the Beginning, an Introduction to Archaeology (Seventh Edition)*. Harper Collins Publishers.

Grant, Jim, Sam Gorin and Neil Fleming. 2007. *The Archaeology Course Book*. London and New York: Rutledge.

Rouse, Irving 1972. *Introduction to Prehistory, a Systematic Approach*. United State of America: Mc Grew-Hill.

Sample Questions

- 1) What is an archaeological site? How would you classify archaeological sites.
- 2) What are the different types of sites and their function?
- 3) How would you identify a trading centre?
- 4) What are primary and secondary site? How would you distinguish between them?
- 5) What do you understand by spatial unit in Archaeology?
- 6) Discuss how a site is formed? What are the approaches for identifying archaeological sites?
- 7) Discuss the implication of settlement archaeology.

