

Chapter-III

EXPLORATIONS

Much of archaeological research is carried on, which has no direct connection with digging of things, in other words excavation. This kind of work is generally known as 'exploration' or more precisely 'field work'. This method essentially precludes any attempt of excavation and is a must for any archaeological research.

The purpose of archaeology is to study "the past history of man as revealed by his material remains". These cannot be studied from out of their context i.e from their geographical environment. Hence exploration has its own intrinsic importance.

Exploration may be defined as a methodical search for and recording of antiquities and the collection of data i.e distribution of man's settlement, his field systems, his religious monuments etc., in relation to environment - viz., vegetation, climate and topography. In short, it is the collection of data of the remains of past from which their contemporary life may be reconstructed. Such preliminary data could be got only by moving about the

actually the structure or metallic objects are in a particular site. This is done with the help of Magnetometer. This can give us information, if the buried remains are first 2' to 3' below the surface and not beyond. This is not very much in vogue. A very general method is "boring". This is percussing the surface of the ground with weighted hammer and listening the sound thus produced. Over an undisturbed ground the sound is dull, over a filled up ditch, or pit, or a raised mound, the sound will be hallow like 'thud' or 'thoomp' or 'Dhub' like wise. This can be found out while a heavy vehicular traffic is moving on the mound also. Walking up and down firmly would also give us the feeling of this and we can actually find out the extent of the ancient mound and its structures. The moist surface of the mound, if one observes in the early morning before sun rise, would reveal in some cases, the structural plans extent on the mound.(surface). The portions covered by walls, generally show whitish patch, due to the exposure of salts, the burials or a cemetery like the Harappan as at Kalibangan.

EXPLORATION KIT

The equipment required for explorations as detailed below

- (1) A Shoulder bag to carry the equipments.
- (2) Small bags - for keeping portable objects like the pottery and stone tools collected during exploration.
- (3) Antiquity /Pottery labels / Site note book.
- (4) 10 Meter tape for noting the measurements of Mound/ Structures/ Sculptures and so on.
- (5) Excavation knive.
- (6) A pick axe / Brushes.
- (7) Pocket compass to know the direction.
- (8) Portable camera with film rolls.
- (9) Binoculars for viewing the topographical features / Geometric

**PROFORMA FOR SURVEY
OF ANTIQUARIAN REMAINS**

PART I

State

District

1. Locality (town, city or village as given in Survey Sheet)
2. Lat. N. Long. E. I" Survey sheet No.
3. Sub-division Tahsil/Taluk
Revenue Circle/ Police Station
Post Office
4. Approach (including nearest railway station, transport and halting facilities and authority to be addressed for reservation of accommodation)
5. Topographical features of the area
6. Climatic data (temperature, rainfall, etc.)
7. Does the locality contain antiquarian remains? Yes/No
if it does, what is their nature? (Strike out whatever does not occur and add new items if necessary).

I. MONUMENT II. SITES/MOUNDS with: III. STRAY ANTIQUITIES

- | | | |
|---------------------------|----------------------------|----------------------------|
| (a) temples | (a) palaeoliths | (a) palaeoliths |
| (b) mosques | (b) microliths | (b) microliths |
| (c) churches | (c) neoliths | (c) neoliths |
| (d) tombs | (d) fossils | (d) fossils |
| (e) graves | (e) megaliths | (e) pottery |
| (f) forts | (f) stone structures | (f) terracottas |
| (g) citadels | (g) brick structures | (g) metal objects |
| (h) palaces | (h) ring wells | (h) stone objects |
| (i) gateways | (i) pottery | (i) glass objects |
| (j) pillars | (j) terracottas | (j) wooden objects |
| (k) minars | (k) metal objects | (k) ivory and bone objects |
| (l) residential buildings | (l) stone objects | (l) beads |
| (m) baoris or wells | (m) glass objects | (m) sculptures |
| (n) tanks | (n) wooden objects | (n) coins |
| (o) bridges | (o) ivory and bone objects | (o) coins-moulds |
| (p) caves | (p) beads | (p) seals and sealings |

- | | | |
|-------------------------|------------------|------------------|
| (q) rock-cut sculptures | (q) sculptures | (q) inscriptions |
| (r) stupas | (r) coins | (r) manuscripts |
| (s) monasteries | (s) coin-moulds | (s) painting |
| (t) gardens | (t) seals and | |
| | (u) inscriptions | |

8. Published references (selected but including references to Imperial and District Gazetteers and local Manuals)
9. Local traditions about the remains
10. List of photographs, sketches and impressions attached.

Signature of the Explorer and date

11. Important observations on column 7 and part II, by a superior after resurvey of the place.

PART II

(Full descriptions, with dates, of all items not struck out in column 7 should be given serially. In the case of 'Stray Antiquities' the name and address of the owner, if any, should be specified. Extra sheets should be attached, if necessary. Photographs should be pasted on sheets provided for the purpose and sketches should be drawn on blank sheets. Impressions of inscriptions should be placed inside covers.)

- Box with pencils / Sketch sheets.
(10) Water bottle.

A standard format for Survey of Antiquarian remains is provided at the end of chapter.

EXPLORATION VS. EXCAVATION

Exploration and excavation are complimentary to each other. Exploration should precede the excavation of a site., as the former provides the basis for the latter. Selection of a site for excavation, is based on intensive and extensive exploration of the region, keeping in view the problem. The sites yielding a series of the same culture - sequence should be first plotted on map and out of them a site of importance is chosen for excavation.

It may be exciting to dig up things, as it happened during 17th to 19th centuries, when field work was not appreciated by the archaeologists themselves. "Archaeology is not only a time science actually but is also a space science and neither aspect can be studied without the other".

After a particular site is excavated and sequence is established, once again exploring the surrounding regions becomes very important. This involves the study of the distribution of that particular culture. Here the exploration may become a guided one in a sense, but nevertheless very important. For example Harappan sites like Lothal and Dholavira in Gujarat. The extensive exploration of Saurashtra and part of Rajasthan have actually revealed the extent of this great civilization. Not only that, certain new features were revealed by the material relics from some of these explored sites. So exploration must precede and succeed an excavation in particular region. In India our knowledge of pre-historic culture is based on planned and intensive regional explorations only.

differences should be detected on the surface relief of the ground. Observation is the most important and that too critical. Next comes the ability to record what is observed accurately, neatly and objectively - there should not be any scope for intellectual partiality in the choice of facts. He must possess a thorough knowledge of the material remains which form the subject matter for archaeology, elementary knowledge of the cultural and social anthropology, ethnology and something of the science, like geology, botany, soil science and so on. He should also be aware of the local tradition and broad history of the region. We may therefore say that Exploration should be (1) Representative (2) Regional (3) Intensive and (4) Intelligent.

Coming to the exploration of mound or an elevated ancient ground proper care should be taken, if possible, to collect on the respective distinguishable contours, and in such collection one may find surprisingly different groups of material. Hence we should keep in mind the different localities in relation to their heights and material relics obtained. This would help in arriving a general sequence of the ancient mound or a locality, with the help of exploration. In river cuttings and rain gulleys we may be able to secure a good amount of ancient relics such a pottery and other antiquities. In some cases, huge mound may itself be cut by the river and we may actually come across, the finds from such cut-sections. In such circumstances, exploration would naturally provide also the sequential distribution of the relics and care should be taken to search out for such cut-sections. Particularly for pre-historic sites river sections and dried ancient river beds are the source.

After an ancient site is located to ascertain, which portion is particularly rich in structures etc., these are some methods, which may be useful.

Magnetic Prospecting:- This method, would reveal where

important. Several of the villages, have the ancient names retained, and they in turn reveal some Puranic stories or incidents related to our historical personalities. For instance 'Kaundinya Pura' - Ujjain, Nasik-Jorwe etc., and so on. The ancient mounds, or localities, in particular within the village bear names (Pusalapadu, Patapadu, Bastipadu, Bandi Pusala Chenu) also. If we enquire a villager with that familiar name he would immediately locate the old locality if any in his village. For instance in Telugu "Padu" bears an ancient mound. In Marathi it is 'Patri' and when you question the villager about its existence in his or nearby village he would give us a valuable clue. Certain localities will go with ghost stories, - "Rakasi Gudda", Kallu etc., and these may be immediately known as megalithic burials. These are some of the tips for an explorer. Thus the local traditions, literature and place names will greatly help locating ancient sites.

Besides these general methods, field work, as has already been pointed out requires a real knowledge of map - "it is geographer's not a motorists" knowledge that is required. Geographical environment plays a decisive role in human settlements. Most of pre-historic and proto-historic settlements, may not be visible in the form of mounds or huge earth works, but may be on plain or semi-plain grounds. In particular, certain hills, are preferred by a group of ancient people. Granitoid region is preferred by Neolithic and Chalcolithic communities. We may have to resort to such regions also, in course of exploration, where perhaps no modern settlements are there to guide. Here the geography of the region is of great consequence.

No beginning can be made in archaeological research without proper and planned exploration. The field worker should therefore possess specific qualifications. He should have critical observation - "an eye for the country". He should not merely look for the ancient sites, but know where to look for them. Small

boundary ditches, barrows, huge megalithic burial sites and many other earth works whose surfaces in relief are capable of casting a shadow. A crop growing on a silted up ditch or pit furrows enough above the surrounding plains to cast a shadow.

The crop marks, often betray the position of sites of which there is no indication in the surface relief at all. These marks are due to (i) difference in colour (ii) difference in the growth of crops. Generally a brownish and pale colour with sparse vegetation, indicates an ancient mound. A well defined dark mark in a crop may be taken to indicate a pit or a ditch. Soil marks, i.e. difference as in colour appearing in bare soil would be greatly revealed by an air photograph. Such contrasts are intensified by parching of the ground in dry summer. This reveals the position of walls, ancient roads etc.

Observation from the air is no doubt a very valuable method of research but it is not enough. Every area seen or photographed from the air should be visited on the ground. Nevertheless in certain circumstances, particularly in cases of certain ancient localities threatened with destruction (such as Nagarjunakonda, Elleswaram) and must be excavated in hurry and sites located in hilly regions (Guler) a brief flight for observation and photography may yield information of greatest value to the intending excavator. It provides saving of time, effort and expenditure.

CERTAIN POINTS FOR AN EXPLORER:

With the help of topographic sheets and in some cases air photographs, we proceed on for exploring certain regions. Even here some important points need to be noted. In a country, particularly like ours, we have to keenly study and note the local traditions and other extent literature available of the region, intended for such exploration. In this connection, the place names are very

country side on foot, noting all the archaeological features, studying the land surface, distribution of soils and vegetation and so on. (Proforma at the end of the chapter).

Maps:- They are essential for any field work., and more so for archaeological exploration. These are topographical sheets, giving the details of present day habitations, the surrounding landscape, the deserted areas, cultivated tracts, ancient temples and mounds of earth etc., along with the contours, various rivers and tanks etc. They are of great value in finding out the ancient places in a locality. We have the Survey of India Topographical sheets of 1 inch to 1 Mile series, which are fairly useful. Ancient and deserted places are usually marked with 'X' sign and temples are indicated with miniature 'Sikhara'. The study of contours also help to distinguish the ancient mounds from the plain grounds. The 1-inch map is no doubt too small a scale, but in other countries like Britain, we have even about 50 inch. to 1-mile. Such huge scale maps are particularly useful for the accurate plotting of earth works and other sites.

Air Photography:- For large scale explorations, of huge ancient cities, river terraces, hilly regions etc., air photography is invaluable. This is first introduced in our country by Charles Close, an army officer, who photographed from the air the fort of Fatepur Sikri and Red Fort. Many details of the ancient structures, and palaces inside these, hitherto unknown, were brought to light. This gave fresh impetus and the technique has been elaborated and widely used by Crawford and Allen. Fundamentally all archaeological sites and of course all non-archaeological disturbances are revealed as differences of tone in a photograph. These tone differences are due to - (i) differences in the reflecting power of surfaces on the ground. (ii) actual differences in the colour of growing crops and grass or of the bare soil. The first group of sites are known as shadow sites - They include the ramparts, ditches, hill forts