CHAPTER-I

Introduction

Significance of Archaeozoological studies:

Archaeozoology, also known as, Zooarchaeology is the study of animal remains recovered in the process of excavations of archaeological sites. These remains, mainly, consist of animal bones and teeth, but may also include other tissues such as mollusk shells, hair, fish scales and egg shells. Such remains might have been the food refuse of ancient populations or remains of the animals used for transportation, farming, guarding and hunting or of the animals kept for company, enjoyment, decoration, clothing, making of tools and using the scrap there from. The remains, now found, are primarily the hard parts of the body such as bones, teeth, and shells which could survive the vagaries of weather and ages. Animal traces, such as footprints and coprolites (fossil dung) also serve as animal remains.

Excavations do not only yield relics of human life and activities, but also huge amounts of fragmented bones that belong to the animals people lived with, ate or used otherwise. The study and analysis of these animal bone assemblages, with the aim of deciphering the relationship between man and animal, is the main focus of archaeozoological research. The bone fragments found on an archaeological site enable the specialist to determine species, sex, age, size, butchering marks and in some cases diseases of the animals that were kept or
hunted. Taking all these results and other existing historical sources into account, it is possible to reconstruct the development of domestication and husbandry in the bygone era. In societies that depended mainly on hunting for their subsistence, certain species of wild animals were of paramount importance. A profound change, affecting both humans and animals, was brought along by ‘Neolithization’ and the domestication of the most important domestic animal species. All through history, the knowledge and efforts of husbandry, as well as several environmental factors, have influenced the size and appearance of our domestic animals.

Archaeozoology, being the study of all faunal remains, helps archaeologists understand past human subsistence, strategies and economic interactions, and completes the picture of the kind of environments humans have inhabited. Animal bones found in ancient settlements tell us about people’s meat eating habits and what kinds of animals they favoured, which parts of the animal they preferred and which parts of the animal they discarded altogether, and how they discarded the refuse. A higher proportion of cattle, for example, generally give hints of an economy more disposed to plough farming than to sheep and goat herding. The remains of animals’ bones also tell us about the seasonality of occupation and types of utilization. High proportions of young males among sheep and goats, for example, indicate that females were allowed to live longer for milking purpose while males were slaughtered as soon as they reached the maximum size for eating.

The analysis of these faunal remains is the documentation of the interaction between man and animals in a given cultural setting. Information about different aspects of man’s and animal’s life such as hunting and fishing strategies, domestication of mammals and birds, herding and breeding related
issues such as how were the domestic animals kept or bred for their meat, milk products or other purposes, processed for meat and fish, dietary preferences of man, trade of foods, etc. are ascertained in archaeozoological studies. Further, animal remains are used as indicators for past environments. Their presences describe the environment or changes in the landscapes, such as deforestation of wooded areas. Finally, archaeozoological data can be used as an additional source for pure zoological research, on issues like extinction of animal species, over exploitation of animals through time, size, and changes through time or space within an animal species.

The realm of archaeozoology is multi-disciplinary and this multi-disciplinary nature of this field stands pronounced in the disagreements over its nomenclature itself. One of the first clear references to this area of study was made by Lubbock\(^1\) who used the term *zoologico-archaeologist* for the professionals who study animal remains. The modern derivatives, such as *zooarchaeology*, *zooarcheologie*, or *zooarchaeologia* are probably the most commonly used terms by the Americans and reflect the anthropological perspective prevalent in their research. In Eurasia and Africa the use of the term as *archaeozoology* is more commonly seen, and this emphasizes the biological nature of the animal remains. Other terms that are occasionally used are *osteoarchaeology*, *bioarchaeology*. In the United States, the term bioarchaeology generally is used to refer to the analysis of human remains from archaeological sites. While these disputes may seem trivial, they reflect differences in the approach and perception of the same material.

As the nature of science of archaeozooloy is multi-disciplinary, its study overlaps significantly with other areas of study such as anthropology,
archaeology, biology, ecology, ethnology, paleopathology, palaeontology and zoology. However, Archaeozoological analyses provide the basis for further interpretations in different related disciplines addressing even distantly related topics like belief systems, cultural exchange, diet and nutrition, disease, domestication, environment and environmental change, ethnicity, food processing, landscape, material culture, seasonality, social status, subsistence strategies and technology.

Archaeozoological studies supplements and complements the archaeological findings. Archaeology and the other historical sciences deal with the history of man in many aspects. Historical writings and illustrations, as well as excavations and cultural artifacts are the main sources for scientists. In the research of time periods, without written records, archaeological excavations are the most important sources of information and the same have been greatly expanded and complemented by various archaeometric sciences like archaeozoology.

Archaeozoology and ‘Man-Animal Bondage’:

The study of ‘Man-Animal Bondage’ is utmost important for constructing the ecosystem that the man, animal and plants have inhabited in prehistoric times and archaeozoology in conjunction with other related sciences plays an indispensable role in bringing forth this relationship. The two principal groups of living organisms, i.e. plants and animals have, from the very early phase of evolution of both the communities, lived together side by side in an intimate association to form the biotic environment or biosphere. In a stable ecosystem the plants and animals form a delicate nutritional interdependence which with minor fluctuations is rebalanced fairly rapidly. In addition to their nutritional
interdependence biotic population of an ecosystem have various other types of inter-dependences like inter-dependence on shelter and defense, carbon dioxide-oxygen inter-dependence, inter-dependence in pollination, inter-dependence in dispersal of seeds and fruits, inter-dependence in relation to aeration and nutrition reproduction and protection etc. There is considerable evidence that humans have benefited both physically and emotionally from a relationship with companion animals, a phenomenon known as the ‘Human-Animal Bond’ (HAB) and archaeozoology by its study and analyses of animals remains throws light on the nature of their relationship and interdependence on each other.

The establishment of man animal relationship leading to domestication of certain animals has been a very slow process, covering centuries but after domestication this relationship has passed on to generations of both the man and the animals with animals, all through their lifetime, offering a wide variety of possible uses to man throughout the ages. It is in continuation of the same relationship that cattle serve man as draft animals for plough and cart, horse and horsemen act as a joint and effective force in war, donkeys, mules, camels and elephants carry people and heavy loads over long distances. Dogs guard house and farmstead, keep watch over the livestock and help in hunting. Cats keep harmful rodents in check. Sheep and goats provide wool and milk, and cattle yield milk too. Hens, ducks and geese lay eggs and were also used for their meat. Still further, even after being killed in the process of hunting or butchering, animals do not only supply meat for nutritional purposes; their bodies supply a lot of raw materials for other products too. The brain is used in tanning, tallow serves as fuel or grease, the bladder can be made into a container, the lower intestines are used as sausage, and the sinews enable bows to be strung. Wool, hair, fur and skin can be made into various fabrics and
leather, feathers are used to fill cushions and pillows and serve as quills for writing. Horn, antler and bone are precious raw materials for a variety of products. The use of these raw materials clearly shows a selection process concerning specific body parts of certain species, as well as the standardized way of processing which has been going on since time immemorial and establishing these facts is the pursuit of archaeozoological science in collaboration with related sciences.

Besides their practical uses in life and death, certain animal species were also worshipped as representations of the gods. A good example is the religion of ancient Egypt. The goddess Hathor was shown to wear the horns and ears of a cow, Bastet had the head of a cat. Anubis was portrayed with the head of a jackal, Horus appeared as a falcon and Sobek as a crocodile. Thot, the god of wisdom, could be represented as an ibis or a baboon. In Memphis, the Apis bulls certain animal species were also worshipped as representatives of the gods and mummified after death and buried in enormous sarcophagi. These animal cults and mummifications reached their widest distribution during the Late Dynastic and Ptolemaic periods of Egypt. A well-known modern examples are the sacred cows of India.

**Harappan Culture - An Introduction:**

Harappan civilization, that was contemporary to the Mesopotamian and Egyptian civilizations, came to light only as late as in 1921-22 despite the first mention of ruins of it having been made some 80 years ago by Charles Masson

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and further despite a visit in 1856 by General Alexander Cunningham, later director general of the archeological survey of northern India, to the site of the ruins of a city where the British engineers John and William Brunton were laying the East Indian Railway Company line connecting the cities of Karachi and Lahore by using ballast of the well brunt bricks of the ruined city by considering it a quarry. A few months later, another ruined city, Mohenjodaro, was discovered, the bricks of which provided ballast for 150 kms of the railroad track running from Karachi to Lahore". In 1872–75 Alexander Cunningham published the first Harappan seal erroneously mentioning it as Brahmi letters, but it was half a century later, in 1912, that more Harappan seals were discovered by J. Fleet, prompting an excavation campaign in 1921–22, which resulted in the discovery of the civilization at Harappa by Sir John Marshall, Rai Bahadur Daya Ram Sahni and Madho Sarup Vats, and at Mohenjo-daro by Rakhal Das Banerjee, E. J. H. MacKay, and Sir John Marshall. A public announcement of the discovery of a new civilization was made in the Illustrated London News.

The Harappan civilization was a Bronze Age civilization dating from 3250–1500 BC with its mature period from 2600 to 1900 BCE. It was located in the north western region of the Indian subcontinent, consisting of what is now mainly modern-day Pakistan and north-west India. It flourished around the Indus River basin, but the civilization primarily centered along the Indus and the Punjab region, extending into the Ghaggar-Hakra river valley and the Ganges-Yamuna Doab. Geographically, the civilization was spread over an area of some 1.5 million sq. kms, making it the largest ancient civilization in the world. The civilization is noted for its cities built of brick, roadside drainage

system, and multistoried houses. The span of this civilization is often divided into three main phases i.e. Early Harappan, Mature Harappan and Late Harappan,

**Early Harappan:**

The Early Harappan Ravi phase first encountered at Harappa, named after the nearby Ravi river, lasted from 3300 to 2800 BCE. It is also referred as the Hakra phase because of its location in the Ghaggar-Hakra river valley and it predates the Kot Diji phase (2800-2600 BCE, Harappan-2) which led to Mature Harappan with the citadel representing centralized authority and an increasingly urban quality of life. Another town of this phase was found at Kalibangan in India on the Hakra river. The mature phase of earlier village cultures is represented by Rehman Dheri and Amri in Pakistan. Possehl have been divided the early Harappan stage is made up of four regional phases that are generally contemporary to one another with the Amri-Nal phase being the first, Second the Kot Diji phase, third the Damb Sadaat phase and forth the Sothi-Siswal phase (Map 1.1). A pronounced geographical expansion into the Potwar plateau and into the India, (Punjab, Haryana, northern Rajasthan, western Uttar Pradesh as well as Gujarat) took place during this period⁶.

While this period is called Pre-Harappan, other terms as proto Harappan have been used in the archaeological literature. There are many common traits present in ceramics, technology, and terracotta’s objects and architecture which also occur in the Mature Harappan period. It is therefore, quite justified to call this material Early Harappan⁷.

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Trade networks linked this culture with related regional cultures and distant sources of raw materials, including lapis-lazuli and other materials for bead-making. Villagers had, by this time, domesticated numerous crops, including peas, sesame seeds, dates, and cotton, as well as various animals, including the water buffalo.

Map 1.1 Map showing the regional cultures of early Harappan phase (after Law, 2011).
**Mature Harappan phase:**

By 2600 BC, the Early Harappan communities had been turned into large urban centres. Such urban centres include Harappa, Ganeriwala, Mohenjodaro in modern day Pakistan, and Dholavira, Kalibangan, Rakhigarhi, Rupar, and Lothal in modern day India. The mature phase of Indus civilization is known as the Harappan civilization, as the first of its cities to be unearthed was located at Harappa, excavated in the 1920s in what was at the time the Punjab province of British India (now in Pakistan). Excavations of Harappan sites have been ongoing since 1920, with important breakthroughs occurring till recovery. To date, sites and settlements have been discovered comprising major urban centres of Harappa, Lothal, Mohenjodaro, Dholavira, Kalibanga, and Rakhigarhi, town and villages etc.

The Mature Harappan phase was mainly concentrated in the Indus and Ghaggar basin and stretched from Gujarat in the south to the Makran coast and the Kachi plain in the west of the foot hills of the Himalayan and along the northern edge of the Ganges-Yamuna doab in the north and east. In the eastern Indus region, Sothi-Siswal material continued alongside and Harappan artifacts throughout the Harappan civilization, suggest that this region was less strongly integrated into the Indus system or had less adopted the Indus ideology. The same was true to local traditions in Saurashtra and north Gujarat. The major cities, during the Mature period, have been identified as Mohenjodaro, Harappa, Rakhigarhi, Ganweriwala and Dholavira etc.⁸(Map 1.2).

There is no doubt that the society that had crystallized around 2600/2500 BCE was significantly different from that of the Early Harappan period, in scale, organizational and social complexity, cultural uniformity and ideology or ethos.

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Map 1.2 Map showing extent of mature Harappan phase (after Law, 2011).
Late Harappan phase:

The Harappan culture flourished for around five to seven hundred years, and in the early second millennium it disintegrated. It did not disappear suddenly but decayed due to economic remains, and many element of the Harappan civilization can be found in later cultures. Current archaeological data suggests that material culture classified as late Harappan may have persisted until at least 800 BCE\(^9\) and was partly contemporary with the Painted Grey Ware Culture.\(^10\) The decay in Harappan culture collapse was marked by the disappearance of the feature that had distinguished the Harappan civilization from its predecessors: writing, city dwelling, and some kind of central control, international trade, occupational specialization and widely distributed standardized artifacts. In the late Harappan period, local material were used for objects like stone tools, and the cultural uniformity of the mature Harappan civilization gave away to a number of regional grouping, often using material reminiscent of that belonging to the early Harappan phase in each area. While there was considerable de-population in the Indus heartland, settlements increased in number in Haryana, Punjab and Gujarat. Late Harappan communities were established in areas well outside (Indus and Ghaggar Region) those occupied by the mature Harappan people, particularly in the east. Sea trade now only reached the inhabitants of Gujarat. The wide distribution of many cultural elements (such as features of ceramic form and decoration and distinctive stamps seals) indicates that there was considerable inter-regional


\(^10\)Jim Shaffer, (1993), “Reurbanisation: the Eastern Punjab and Beyond.” In Spodek, Howard; Srinivasan, Doris M. *Urban Form and meaning in South Asia: The Shaping of Cities from Prehistoric to Pre-colonial Times.*
communication and movements of individuals and groups both within the subcontinent and between it and the region to its north-west\(^\text{11}\) (Map 1.3).

Map 1.3 Map showing regional late Harappan cultures (after Law 2011).

The discovery of the Harappan civilization has brought to light the presence of first civilization in the Indian subcontinent and Intensive and extensive explorations have brought to light over two thousands sites till date\(^\text{12}\).

**Extent of Harappan Culture:**

Till the partition of India and Pakistan most of the excavations work relating to the Harappan civilization, was confined to the present day Pakistan. But after that when the Indian archaeologists stared exploring the Indian territory, the Harappan civilization remains were found here also which led to the increased interest of the archaeologists in exploring new sites. As a result, within a couple of years, Ropar (on Sutlej), Kotla Nihang Khan etc. were locked and then the eastern most limit of the Harappan civilization was thought to have limited up to this place only. Subsequent discoveries have extended the geographical limits of Harappan civilization beyond the Indus and its tributaries. As now the Harappan civilization extended from Sutkagendor, on the Makran cost situated on the border of the Iran and Pakistan, to Alamgirpur and Hulas, Mandi and Shamlinagar on the Hindon in upper doab of western Uttar Pradesh and also in Mandovali and Bhargarh in Delhi, Manda in Jammu in north to Daimabad in northern Maharashtra (Map 1.1; 1.2; 1.3 & 5.1). The extent of the Harappan civilization in south Asia was greater in area than the contemporary civilization of the Nile in Egypt and Euphrates and Tigris (Mesopotamia) in Syria and Iraq. Apart from this there were Harappan trading out posts in gulf countries and Afghanistan (Shortugai).

Harappan Chronology:

The chronology horizon of the Harappan civilization has been tossed backward and forward from time to time from 3250-2750 BCE on the one hand to 2500-1500 BCE on the other. However, a closer scrutiny of the evidence suggests that the Harappan civilization may have attained its maturity by about the middle of the third millennium BCE or perhaps a century earlier. It maintained its maturity till about 2000 BC. Therefore, decay set in and before the end of the first quarter of the second millennium BCE, all the elements that constituted its maturity disappeared or degenerated. This dating is based; on the one hand, on a comparative study of the objects of mature Harappan era like type-seal, weights, etched carnelian breads, etc. and faunal remains in a datable context at various west Asian sites and, on the other, on the radiocarbon dates from the Harappan sites themselves \(^\text{13}\) (Table 1.1).

The chronology of the Harappan culture had been established to some extent using material paralleled in historically dated Mesopotamia. This chronology showed that the Mature Harappan period had begun by around 2500, BCE.

### Table 1.1 Chronological development of Harappan civilization\(^{14}\).

<table>
<thead>
<tr>
<th>Date range</th>
<th>Phase</th>
<th>Era</th>
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<tbody>
<tr>
<td>7000 - 5500 BCE</td>
<td>Mehrgarh I (aceramic Neolithic)</td>
<td>Early Food Producing Era</td>
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<tr>
<td>5500-3300</td>
<td>Mehrgarh II-VI (ceramic Neolithic)</td>
<td>Regionalisation Era 5500-2600</td>
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<tr>
<td>3300-2600</td>
<td>Early Harappan</td>
<td>Integration Era</td>
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<tr>
<td>3300-2800</td>
<td>Harappan 1 (Ravi Phase)</td>
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<tr>
<td>2800-2600</td>
<td>Harappan 2 (Kot Diji Phase, Nausharo I, Mehrgarh VII)</td>
<td></td>
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<tr>
<td>2600-1900</td>
<td>Mature Harappan (Indus Valley Civilization)</td>
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<tr>
<td>2600-2450</td>
<td>Harappan 3A (Nausharo II)</td>
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<tr>
<td>2450-2200</td>
<td>Harappan 3B</td>
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<td>2200-1900</td>
<td>Harappan 3C</td>
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<tr>
<td>1900-1300</td>
<td>Late Harappan (Cemetery H); Ochre Coloured Pottery</td>
<td>Localisation Era</td>
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<tr>
<td>1900-1700</td>
<td>Harappan 4</td>
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<td>1700-1300</td>
<td>Harappan 5</td>
<td></td>
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<tr>
<td>1300-300</td>
<td>Painted Gray Ware, Northern Black Polished Ware (Iron Age)</td>
<td>Indo-Gangetic Tradition</td>
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</tbody>
</table>

Archaeozoological studies in the Indian context:

Faunal studies in India reflecting on domestic species began in the first quarter of 20th century when excavation of sites like Mohenjodaro and Harappa were conducted. The works of these earlier scholars mainly confine to listing of species encountered at the archaeological sites. The excavation reports on Mohenjodaro, Harappa and Chanhudaro contained additional evidence in the form of terracotta animal figurines, engravings and painting on pottery. Setting aside these happy exceptions, there is hardly any other noteworthy work of the pre-independence period. In 1970s, scholars like Nath, Clutton Brock, Shah, Alur, Thomas and Paddyya made efforts towards quantifying the faunal remains. These scholars in their works described distribution and measurement of some bones so that the same could be used by later scholars. During this period the idea of comparing specimens from one site with the others was also initiated. Important efforts towards quantification of faunal

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studies were started by P.K. Thomas\textsuperscript{24}. The quantification of faunal remains and interpretation of dietary habits was also carried out by Clason\textsuperscript{25} on the bones found at several Indian sites. Important landmark in Indian archaeozoology is the work of Joglekar\textsuperscript{26}, whose doctoral thesis on Deccan Chalcolithic sites described a range of biometric methods that are applicable to the study of the faunal remains. Other important contributions to this field have been made by Meadow\textsuperscript{27}, R. Conard\textsuperscript{28}, Allchin\textsuperscript{29}, A.K.Sharma\textsuperscript{30}, V.V. Rao\textsuperscript{31} etc.

The Deccan College, Pune has been a pioneer in the field of archaeozoological studies for more than last three decades. Among the archaeozoologists, a special mention may be made of P. K. Thomas, who took the lead in such studies in the country and examined with fruitful results, independently as well as jointly with P.P Joglekar\textsuperscript{32} and Arti Deshpande


\textsuperscript{25} Clason, A. T., (1979), \textit{Wild and Domestic Animals in Prehistoric and Early Historic}, India, Lucknow.

\textsuperscript{26} Joglekar, P.P., (1991), Biometric approach to the faunal remains of western India: with special reference of Kaothe and Walki (unpublished Ph.D thesis), Post Graduate and Research Institute, Deccan College, Pune.

\textsuperscript{27} Meadow, R. H., (1979), Early animal domestication in South Asia: a first report of the faunal remains from Mehrgarh, Pakistan, H. Hortel (ed.), \textit{South Asian Archaeology; Proceeding of the 4th international conference}, Berlin, pp. 143-180.


\textsuperscript{29} Allchin, F. R., (1961), Utnur excavations, Andhra Pradesh Govt., \textit{Archaeological Series}, No. 5, Hyderabad.


\textsuperscript{32} Joglekar, P. P., (1991), Biometric approach to the faunal remains of western India: with special reference of Kaothe and Walki (unpublished Ph.D thesis), Post Graduate and Research Institute, Deccan College, Pune.
Mukharjee\textsuperscript{33}, faunal assembles from a large number of archaeozoological sites. Some of these important contributions to Indian archaeozoology include the study of diversity in species and intra-site faunal variability over the time in relation to ecological opportunities. Other experts of this institution are G.L. Badam\textsuperscript{34}, essentially a paleontologist, V.G. Sathe\textsuperscript{35}, and S.J. Pawankar\textsuperscript{36}. Despite some limitations, the work done during the course of the last three decades is indicative of the growing awareness among archaeologist in India of the importance of faunal studies in archeological research. These studies have concentrated on the aspects of early centers of animal domestication in India as well.

**Scope of the Present Research Work:**

In this research work, an attempt has been made to assess the role of animals in economy and to reconstruct the social structure of the Harappans. While attempting this study, the researcher has been conscious of the fact that domestic animals played an important role in the economy of the Harappans in early to late stages. The importance of the study of animals and domestic animals in Harappan civilization through the archaeological and archaeozoological remains have been studied by the researcher on the basis of research papers, excavation reports and unpublished materials. The archaeozoological studies initiated by R.B.S. Sewell and B.S. Guha (1931)\textsuperscript{37} and


\textsuperscript{34}Badam, G. L., (1986), *Preliminary report on the faunal remains from Chalolithic Daimabad, Maharashtra*, pp. 93-100.


by B. Prashad (1936)\textsuperscript{38} at sites namely Mohenjodaro and Harappa respectively were specially perused so far as the Harappan animals are concerned. Such studies help us immensely in the reconstruction of various aspects of Harappan civilization but firstly it helps us to know the geographical and climatic conditions and other environmental complexes, together with economics aspects of the bygone period and secondly, the protohistoric bones provide us with valuable dating material of the Harappan times and help in more reliable stratigraphic reconstruction of cultural material. Thirdly, it gives an idea of domestication of animals by pre and protohistoric people.

The study of domestic animals on the basis of both archaeological and archaeozoological evidences from Harappan archaeological sites provides information for the interpretation of a range of questions regarding changing patterns and continuing trends in the environment, subsistence patterns and economies of Harappan people.

\textbf{Objective and Methodology:}

The objective of this study is to find out the relationship between Harappan people and their animals with the main focus on the study of domestic animals in Harappan civilization. The aim in the research work is to conduct comparative study, region-wise as well as for the whole Harappan ‘Empire’, on the basis of archaeological materials and archaeozoological evidences from a number of early to late Harappan sites in India and beyond. The primary focus of this research is to reconstruct the animal based economy and social life of the

Harappans. The environmental aspect has also been taken up but due to constraint of the topic, evolutionary biology of the animals has not been taken up which is also very important.

It is from the study of reports on faunal material obtained from several excavated Harappan sites that we can reconstruct the importance of herd animals in Harappan civilization. These domestic animals played an important role in the socio-economic life of the Harappan people. The available information on the faunal remains is interpreted in various types of settlements. The trends of the bio-archaeological information from urban sites, permanent sites and small rural settlements are studied and such differentiation helps in understanding the role of subsistence production at different levels of Harappan society.

Animal remains, help in the reconstruction the history of domestication, food habits of the human group in question as well as their food economy and social organization. Husbandry methods to a great extent reflect the social structure of a community and their technological achievements. The inferences and evidences of domestication are of particular significance. The domestication of plants and animals brought about a qualitative change in human life. In them can be traced the genesis of settled life, private property and many other human institutions. The process laid the foundation for the succeeding human achievements.

Animals’ skeletal remains are evidence which help to fill in the natural and economic background in which early to late Harappan Cultures flourished. The skeletal remains are important because such remains are of those animals with whom man shared his environment and which were a vital part of his daily life, both as a source of raw material and of food.
This research work is based primarily on the published faunal reports. In the last few decades, there has been a complete change in the approach to the study animal bones from archaeological sites. Based on faunal remains a growing interest in protohistoric economies in general and the Harappan economy in particular have generated interest amongst archaeologist who are now more aware and interested in animal bones.

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