

**BIOARCHAEOLOGICAL STUDIES IN INDIA: AN ASSESMENT OF PROGRESS
AND PROSPECTS**

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ABSTRACT

Biological remains form a major component of the archaeological record. These remains in form of carbonised seeds, pollens, phytoliths, bones, teeth, antlers, and shells of exoskeleton provide information about how humans adapted to their environment, and interacted with the rest of the biological world. The term 'bioarchaeology' is used in many different ways in archaeological world. A wider and more inclusive definition of bioarchaeology is that 'it is the study of plants, animals and human remains recovered in archaeological context'. It forms important, rather to say that the most critical part of archaeological evidence. It encompasses applications of several biological techniques (including biomolecular studies) to resolve archaeological problems. Secure identification of the species of plants and animals from reliable contexts forms a core of bioarchaeological investigations. Such investigations in Indian archaeology have a history of nearly seven decades. During this period approaches to study plant and animals in the past have progressed from simplistic taxonomic listings to achieving more complex research objectives.

Archaeology at a general level is interested in making sense of the remains of animals and plants found at archaeological sites. A few bioarchaeologists (plant and animal scientists) involved in interpretation of the archaeological record in India have created a baseline of information (database) adequate to address various issues related to human-animal-plant interactions. All these components are living dynamic systems constantly adapting to the environmental change. Besides acting as biological system, humans in the past were intimately connected to culture-historical processes. Cultural adjustments served as instruments of adaptive strategy for continuation of the gene pool. So is the story of domestic plants and animals that have adapted to live in the realm of the human world. It is this two-way interaction between humans and their domesticated organisms, extremely crucial and interesting part of bioarchaeology.

In order to gain knowledge about interaction between humans and their domesticated organisms, it is necessary that all the three are viewed in totality. However, in this paper emphasis is given on the progress of archaeo-faunal or archaeozoological studies in India and what needs to be done in future. Following points are included in this paper:

1. What is the status of archaeo-faunal studies within the broader frame of archaeological investigations?
2. Which infrastructure is available and what is the condition of human resources?
3. What are the impacts of skewed Indian archaeo-faunal studies?
4. What are basic identification-related unresolved issues?
5. How to deal with taphonomy and site formation related interpretations?
6. How best biomolecular studies including aDNA and protein polymorphism can be applied to Indian archaeo-faunal enquiries?
7. How can inputs from other disciplines be used to look and humans and animals in the past?

In recent years Indian archaeo-faunal enquiries are getting more diversified than before. Archaeo-faunal material is now being examined in relation to taphonomic processes and intra-site patterns of animal use besides the role of animals in the food economy. However, often information necessary for understanding finer points of culture-historical processes in ancient India is inadequate. Some of these points that need more attention now are ecological background and environmental interpretations, origin and domestication of economically important species and their role in the culture change. Although a few attempts have been made, mostly literary, ethnographic and pictorial sources about diversity of animal uses have not been sufficiently tapped as corroborative materials. This paper aims to provide an introspective assessment of, (a) what progress has been made in analytical methods, (b) which are the methodological constraints, and to look for possible steps needed to take the discipline of Indian bioarchaeology forward.