

## ARCHAEOZOOLOGY AND THE IMPORTANCE OF INTERDISCIPLINARY STUDIES FOR THE ARCHAEOLOGY OF BAJA CALIFORNIA

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*In order to understand human groups in their biological aspect, in their interaction with their environment and their relationships towards other human groups within certain times and places, we need to create knowledge going beyond the limits of description, promoting the participation of different sciences within an interdisciplinary program. The study of archaeological materials, seen from different perspectives, allows us to solve problems analytically in order to combine information and to generate integrated knowledge about the lifeways of ancestral human groups. In this way, archaeozoology allows us to study remains of the animals that lived together with humans, providing an important means by which to discover more about the interactions between the animals and human groups that inhabited Baja California in past times, contributing to the understanding of archaeology in Baja California.*

This document proposes to evaluate the importance of interdisciplinary work in building systematic knowledge about the archaeology of Baja California. If seen from a perspective that is not merely descriptive or multidisciplinary but truly interdisciplinary, knowledge would be advanced by integrating results coming from the diverse disciplines involved in a particular project.

The multidisciplinary approach is to study and analyze objects or items through different disciplines. From each of them, different descriptive results, identification, and records will be obtained, and this allows the production of information without integrating data from the other disciplines involved in the same project.

In an interdisciplinary approach, information is integrated by means of analyses and syntheses coming from each discipline involved in the project. In this case, results are evaluated, compared, and discussed in order to synthesize and build it up as integrated knowledge. In this way, there is an efficient advance towards understanding events that prevailed in a specific time and place.

To do an interdisciplinary study, it is necessary to have a clear main objective for the study, compatible with the project and with the research areas involved. Each discipline will pursue its particular objectives, without departing from the central objective of the project. There must be continuous and multidirectional communication among the participants in each area, in order not to merely meet the particular objectives and create conditions of isolation between the different disciplines, which might result in the loss of scientific objectivity.

### INTERDISCIPLINARY KNOWLEDGE IN ARCHAEOLOGY

Archaeology is a discipline that must promote interdisciplinary studies, so as to understand the ways of human societies in the past and their processes of change and interaction with their environment and with other human groups. To reach its fundamental objective - human societies - it must enter the field of geography in order to understand the resources that societies used in the past and to place study sites spatially (Valadez 1999). It also gets help from geophysical and geochemical techniques in order to find archaeological sites. It analyzes botanical and zoological samples to understand what kinds of plants and animals were consumed by the human groups in the past. It enters the area of genetics to solve questions about migration and inherited relationships between human groups. Chemistry is also a resource field for dating the sites under investigation (Manzanilla et al. 2003).

This is why it is so important that archaeological projects be developed in an interdisciplinary environment, where each of the discipline contributes information that will allow progress in this field of knowledge.

### ARCHAEOZOOLOGY AND ADVANCES IN ARCHAEOLOGY

Archaeozoology or zooarchaeology, as it is sometimes termed, is one of the disciplines that have been involved closely with archaeology. This discipline is newly developed in Mexico and has achieved significant advances within Mexican biology and anthropology. However, a real link and a two-way flow of information between this field

and archaeology is required for it to develop well, meet its objective to support archaeological research, and go beyond a simple taxonomical description as a consequence of its analyses. Without an understanding of archaeological context, archaeozoological results may lack meaning. To do an interdisciplinary study, there must be a close relationship that will allow the archaeozoologist to understand the stratigraphic context of the faunal assemblage and to reconstruct the factors that led to their deposition. It is true that archaeozoology by itself contributes to the understanding of the archaeological context, but it is important that the animal remains deposited in human contexts be interpreted together with all the available archaeological information, so that we can understand past societies and economies. There will be a convergence between the different lines of research (archaeology and archaeozoology), although methodologically the assemblages are studied separately.

Archaeozoology seeks to know about the relationship between animal species and human populations in the past, some of which will never repeat themselves again, whether due to the extinction of a particular species or of a human group. This has important implications related to nature conservation strategies, as well as potentially providing information to zoologists and palaeontologists.

Even with the progress made within this discipline, as a truly interdisciplinary way of working it still has to overcome a number of factors. One of them is a consequence of advances in matters of infrastructure and is reflected in archaeological projects consisting of salvage excavations, which generally are quick and less integrated, and thus leave aside the activity of the archaeozoologist due to lack of time and resources. Notwithstanding, involvement in these projects is necessary for archaeozoology's active development, where work in the field is as important as lab work. This will allow for broadening archaeological and archaeozoological knowledge.

#### ARCHAEOZOOLOGY IN BAJA CALIFORNIA

Up until a few years ago, most archaeozoological studies in Mexico were limited to the central and southeastern part of the country. There, sites that are spectacular due to their size and monumentality may be found. A complex web of social relations was formed within these sites, which makes them more attractive to study.

The northern part of the country, especially the Baja California peninsula, was inhabited by hunter-gatherer-fisher groups that lacked complex structures and buildings, and archaeological items recovered must be studied in an integrated way in order to obtain a maximum of information about the groups that inhabited these places. In this sense, archaeozoology becomes a discipline with a potential to

generate information, as long as there is a operational link that makes it possible to integrate the results in the formation of knowledge.

Taking all the foregoing into consideration, since 2002 the Centro INAH Baja California has initiated its first biological work as an effort at interdisciplinary (archaeological/biological) work within archaeological projects. Up to the present, there has been participation in a series of projects directed by the Centro INAH Baja California. This has enabled us to characterize some of the human-animal relationships developed in the Baja California peninsula throughout its different periods of history (Guía-Ramírez 2002a, 2002b, 2003, 2004).

For the Palaeoindian period, through the Ignacio Zaragoza Site project, we described a preference for terrestrial resources, mainly small-sized animals such as rabbits and hares, as an animal protein source (Guía-Ramírez 2005). We still need more studies relating to this period in order to characterize the use of faunal resources by Palaeoindian groups.

For the Archaic and Late Prehistoric periods, we have taken part in many salvage projects at the shell middens in the northern Pacific part of the peninsula. Here we can observe that, during this period, a close relationship was established between marine faunal resources and Baja California human societies. There is no specialization towards a certain species or faunal group; on the contrary, there is a marked diversity in the use of vertebrates.

For the Late Prehistoric Period, work is being done with the El Vallecito archaeological project, where a change in the use of faunal resources is seen. Species of terrestrial origin, mainly small-sized mammals, were preferred. The relationship with the coastal resources was continued, but it became mainly seasonal. During this period, resources from inland areas were preferred during the summer, and coastal resources were preferred in winter. This allowed a coast-to-mountains-to-coast flow of resources (Guía-Ramírez, 2002a, 2003, 2004).

Regarding the mission period, the results of archaeozoological analyses let us view the change in the economy of hunter-gatherer societies into an agricultural-ranching system, which imposed dramatic upheavals with the arrival of domesticated species.

There is still much to be done and discovered, but with teamwork and an integrated vision within which interdisciplinary research is favored, we will go forward in the field of knowledge that attempts to reconstruct a history that dates back thousands of years, created by human societies: specifically, the history of Baja California.

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