

EXCAVATIONS AT MARUCA, A PRECERAMIC SITE IN SOUTHERN PUERTO RICO

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ABSTRACT

A recent set of radiocarbon dated shows that the Maruca site, a preceramic site located in the southern coastal plains of Puerto Rico, was inhabited between 5,000 and 3,000 B.P. bearing the earliest dates for human habitation in Puerto Rico. Also the discovery in the site of possible postmolds, lithic and shell workshop areas and at least eleven human burials strongly indicate the possibility of a permanent habitation site.

RESUME

Recientes fechados indican una antigüedad entre 5,000 a 3000 años antes de del presente para Maruca, una comunidad Arcaica en la costa sur de Puerto Rico. Estos son al momento los fechados más antiguos para la vida humana en Puerto Rico. El descubrimiento de socos, de posible talleres líticos, de áreas procesamiento de moluscos y por lo menos once (11) enterramientos humanos sugieren la posibilidad de que Maruca sea un lugar habitation con cierta permanence.

KEY WORDS: Human Remains, Marjuca Site, Preceramic Workshop.

INTRODUCTION

During the 1980s archaeological research in Puerto Rico focused on long term multidisciplinary projects in early ceramic sites such as Sorcé/La Hueca, Maisabel and Punta Candelero. This research significantly expanded our knowledge of the life ways and adaptive strategies of Cedrosan and Huecan Saladoid cultures.

Although the interest in these early ceramic cultures has not declined, it seems that during the 1990s, archaeological research began to develop other areas of interest. With the discovery of new preceramic sites of the Archaic age found during construction projects, the attention of specialists has again been focused on the first in habitants of Puerto Rico.

The recent excavations on sites such as Puerto Ferro on Vieques Island (Narganes 1993), Angostura on the northern coastal plains (Ayes 1989), and Maruca on the south central coast of the island (Pantel 1994; Rodríguez 1995, 1997a, 1997b) (Figure 1), triggered new research on these early preceramic sites. They had been radiocarbon dated at least from the second and third millenniums before Christ, Period 1B, according to (Rouse 1986). We all agree that the resurgence of studies and publications on Lithic and Archaic age sites in the Caribbean are long overdue.

SITE DESCRIPTION

In this presentation I will summarize the most import data gathered up to this moment from the Maruca site. This small site is located west of Ponce, the largest city on the southern coast of Puerto Rico (Figures 1 and 2). Maruca was discovered by archaeologist Jesús Figueroa during a field survey required for the construction of a new shopping center by K-Mart Corporation. Since

1991 the site has been researched at different stages by various archaeologists that were unable to complete the required work (Pantel 1994). Finally, after a hiatus of almost one-year, the work at Maruca was completed in 1996 under my supervision and with the full sponsorship of K-Mart Corporation and the Institute of Puerto Rican Culture.

Maruca is now located 1.5 km from the present Caribbean Sea shoreline, in the midst of a coastal alluvial plain and more than half a kilometer from the present Matilde River channel (Figure 2). Based upon geomorphological studies, 5000 years ago, this site was much closer to the coastline, probably less than a few hundred meters. Maruca was most likely a sandy elevation surrounded by wetlands in the middle of thick mangrove and close to an old mouth of the Matilde River.

The horizontal extension of the site is barely 260 m², small if compared to other Archaic sites on the region (Figures 3 and 4). In spite of its size, the site contained dense refuse deposits of up to a meter in thickness. A variety of stone and shell artifacts, food remains, post molds, possible workshop and activity areas, and at least eleven human burials were removed from the deposits. The preservation of the site was excellent, largely because it was almost sealed and undisturbed under layers of recent alluvial deposits. These deposits transformed the area, over the last 2000 years, into a coastal plain, which until recent times was used for the production of sugar cane.

CHRONOLOGY

The antiquity of preceramic Archaic age sites in Puerto Rico has always been a source of speculation and discussion. Until recently, the earliest dates were not even remotely comparable to the ones for Hispaniola, Cuba or Trinidad. A set of eight radiocarbon dates had been obtained from Maruca. The two earliest samples associated to the beginning of the settlement were dated with two sigmas, 95 percent probability, to be between 4840-3895 B.P. The remaining dates clustered between 3465-2445 B.P.

The dates from Maruca are the earliest for a preceramic site in Puerto Rico, although a date of 5960 B.P. was obtained by archaeologist Carol Ayes from a single sample for the Angostura site (Ayes 1989).

LITHIC ASSEMBLAGES

A large amount of mostly chipped stone implements and some ground stone tools were recovered in Maruca. We invited Jorge Febles, prominent Cuban specialist in early lithic assemblages, to undertake a study of the lithic materials from the site (Figure 5). Geologist Eduardo Questell and archaeologist Jeff Walker assisted Febles in Puerto Rico.

Febles analyzed approximately 5,000 lithic artifacts, of which one fourth were manufactured from chert and the rest from meta-volcanic rocks, andesite and basalt, among others (Febles 1996). Overall the source materials for the lithic artifacts appear to be local, but the chert was determined to be from the vicinity of Cabo Rojo in the southwestern tip of the island.

However, according to observations made by Walker, some of the tools appear to have been manufactured from source materials common to the island of Antigua in the Lesser Antilles. A black, lustrous chalcedony blade that resembles obsidian, is an anomaly in the collection, and we have established its source within the known geologic formations of Puerto Rico. These findings, although of a limited nature, establish that the inhabitants of Maruca had access to source materials from

outside the immediate region.

The Maruca collection contains blade tools, utilized flakes, core tools and debitage (Figures 6 and 7). Unmodified chert cores are scarce. The lithic assemblage contains scrapers, burins, knives, stemmed points assigned to the Couri, Melones and Seboruco types (Figures 8 and 9). Some micro points are closely related to the Canimar type and perforators to the Canimar and Poverty types. Other functional categories in the assemblages include scrapers, and tools with denticulate edges (Figure 10).

Analysis of the Maruca collection also indicates the use of microlithic reduction technologies similar to that of Playita in Cuba, archaic assemblages from Florida and the Poverty Point complex of the Mississippi Valley. In Febles' judgment, preforms and tools from Maruca contain attributes that are consistent with these early lithic manufacture traditions, further corroborating the antiquity of this site.

Febles also studied the ground and pecked stone tool assemblage from Maruca. The ground stone tool assemblage includes percussion hammers, a few plain, conical *manos*, anvil stones, mortars, grinding stones with edge wear and stones with small ground depressions on one or two sides (Figure 11). It is inferred that some of these tools were used in the processing of dietary resources such as plants and seeds.

The technological traditions identified in Maruca by Febles are mostly related to the proto-Archaic of Cuba and the paleo-Archaic of Hispaniola. The microlithic technologies also share similarities with those of Playita in Cuba, Máximo Point in Florida and Poverty Point. These data are important to our reconsideration of the origins and migratory routes of the oldest inhabitants identified up to the present in Puerto Rico and the first peopling of the northeastern Caribbean.

Associating the lithic and shell assemblages from Maruca as part of the Curian Casimiroid tradition from Hispaniola and Cuba is also possible. Here the flaked tool technology is complemented with a minor ground stone and shell artifact assemblages, including some shell and stone beads and ornaments. The present analysis clearly favors a western Casimiran origin for the inhabitants of Maruca and their lithic assemblages and technologies, although some influences might be also present from the Ortoroid series from the Lesser Antilles.

SHELL ARTIFACTS

The Maruca population also used marine shells to manufacture tools that complement the stone tool assemblages. The abundant resources of the nearby Caribbean Sea and adjacent mangroves, permitted the inhabitants of Maruca to use conch shells and other larger and heavier univalves.

Febles research resulted in the identification of large projectile points, hand picks, and other large sized tools manufactured from *Strombus gigas* and other large saltwater gastropods, associated to the earliest component of the site (Figure 12). Later components indicate a reduction in tool size and an increase of functional types similar to what was clearly observed for the lithic assemblages (Febles 1996).

A limited number of personal items, such as simple perforated shell beads and small carved pendants from shell and mother of pearl, were recovered from Maruca. This provided evidence of the aesthetic concerns and technical achievement of one of the oldest cultures of the Caribbean region. Once again, Febles noted similarities in the shell tools and adornment assemblages with those

of Cuba. However, the shell “gubias” with their distinctive beveled edge so common to Cuban archaeology is completely absent from the site and from other Archaic age sites in Puerto Rico.

BURIALS

As mentioned before, eleven primary burials, all from adult individuals, were unearthed from Maruca. The collection was studied by physical and forensic anthropologist Edwin Crespo (1997), and the field procedures and preliminary identification of the burials were under the direction of specialist Juan Carlos Rosario (1997). As far as we know, this may be the largest skeletal sample excavated and analyzed from the Archaic site in Puerto Rico.

Eight males and three females make up the sample all between 17 and 35 years of age. Seven were individual burials and the remaining four were collective burials, divided in two sets of male individuals buried side by side in close anatomical association. Only one burial was flexed and the rest were placed in extended dorsal position, in a general east/west or west/east position. Female adults measured between 4'8" and 5'1" and male adults between 5'2" and 5'4". No evidence of cranial deformation of any kind is present in the Maruca burials.

The first collective burial is made up of two young adult males, both in extended position and very close to each other. The proximity is such that the left arm of one is laid across the right arm of the other (Figure 13). The second grouping is made up also by two males in extended position and in close proximity to one another. The headless and flexed body of a female was located at the feet of one male. According to Crespo, it seems that during the burial of the males the flexed body was partially impacted and the skull was placed between the males, almost facing one of them (Crespo 1997).

OTHER FINDINGS

Another important finding in Maruca was a set of post molds that might indicate a permanent structure. However, there are not more than ten, and establishing any pattern of shape, size or function of a possible structure is very difficult. In addition some areas with unusual concentration of stones and shells were also located in association with hammer stones (Figure 14). They may indicate food processing areas as well as lithic and shell tool manufacturing workshops.

FOOD REMAINS

Recently we have received the report on faunal remains prepared by specialist Yvonne Narganes (Narganes 1997). Narganes examined close to 9,000 fragments of vertebrate and invertebrate faunal remains. Ninety-eight percent of the sample was reported to be crustacean remains, mostly mangrove crabs (*Cardisoma guanhumi*), and freshwater crabs (*Epilobocera sinuatifrons*)

The negligible vertebrate bone fragments examined were mostly from fish and coastal birds, with a much smaller number of reptiles and mammals. The only mammal was a “hutia” rodent of the *Heteropsomys insulans* species.

The malacological evidence, close to 10,000 individuals, also studied by Narganes, suggest

an overwhelming exploitation of species related to the coastal and mangrove ecosystems, particularly *Crassostrea virginica*, *Rhizophora mangle*, and *Arca zebra*. Gathering seems to have been the main source of food for these Archaic inhabitants of Maruca.

The limited evidence of fish, fresh and saltwater turtles, marine mammals and other food resources that must have been fairly common near Maruca suggest that this settlement was a seasonal camp. The variety of raw materials for their chipped stone tools also suggests a high mobility of the inhabitants of this site. Other data toward seasonality is the fact that infants and children's burials are not present and women are significantly under represented. Still the evidence of possible structures and at least eleven burials indicate a relative stable occupation.

We are expecting the results of the paleobotanical and other specialized studies that would complete the knowledge on Precolumbian inhabitants of Maruca. Recent studies would stimulate a new revision of the current knowledge of the preceramic cultures that settled the northeastern Caribbean region 5000 years ago.

ACKNOWLEDGMENTS

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Finally a very special recognition to my best and loyal friend Angel "Chiqui" Colón, field and laboratory supervisor of the Maruca project, who died a year ago in a car accident (Figure 15). Angel "Chiqui" Colón was a very special person to all of us who shared his friendship and archaeological knowledge. We will always miss him.

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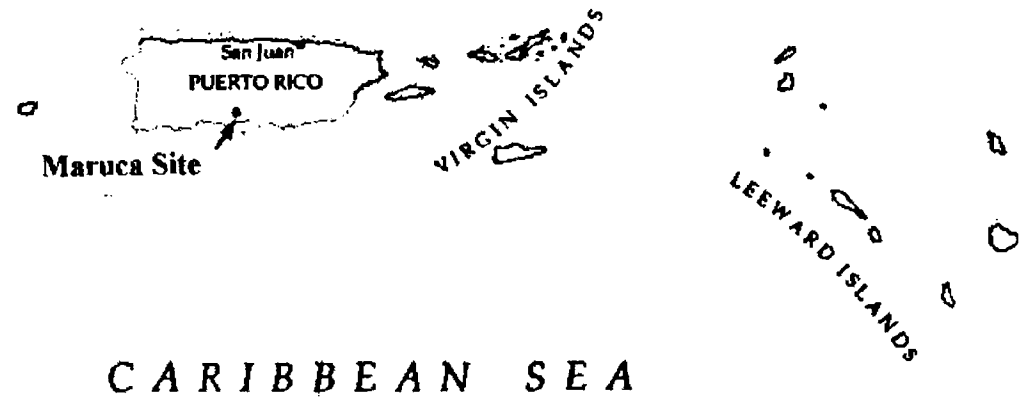


Figure 1. Site Location.

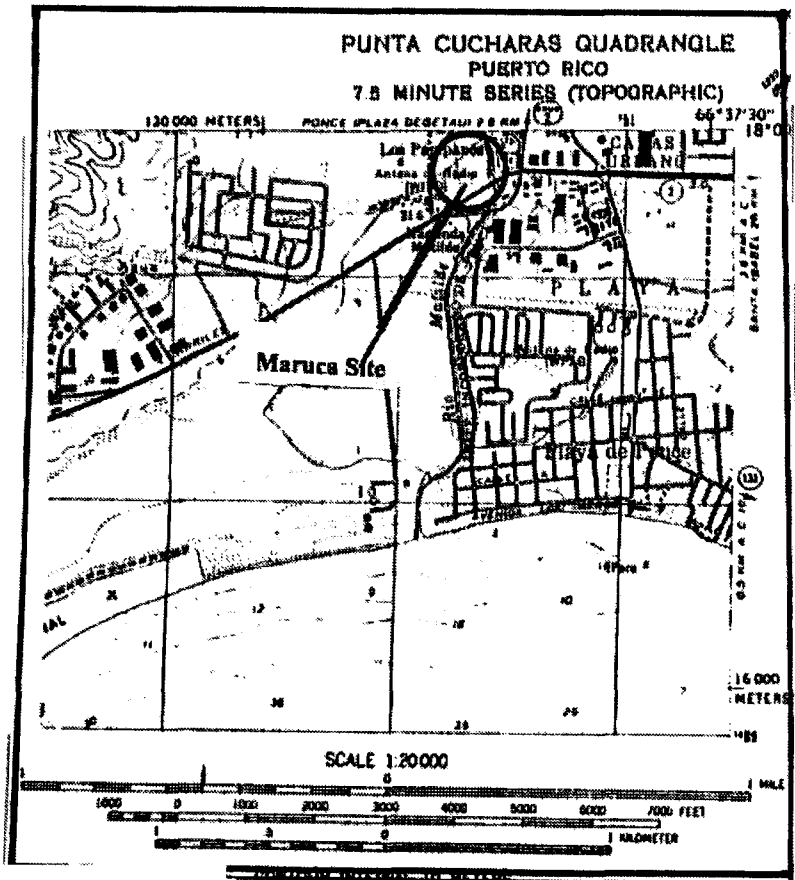


Figure 2. Maruca Site in the USGS Quadrangle.

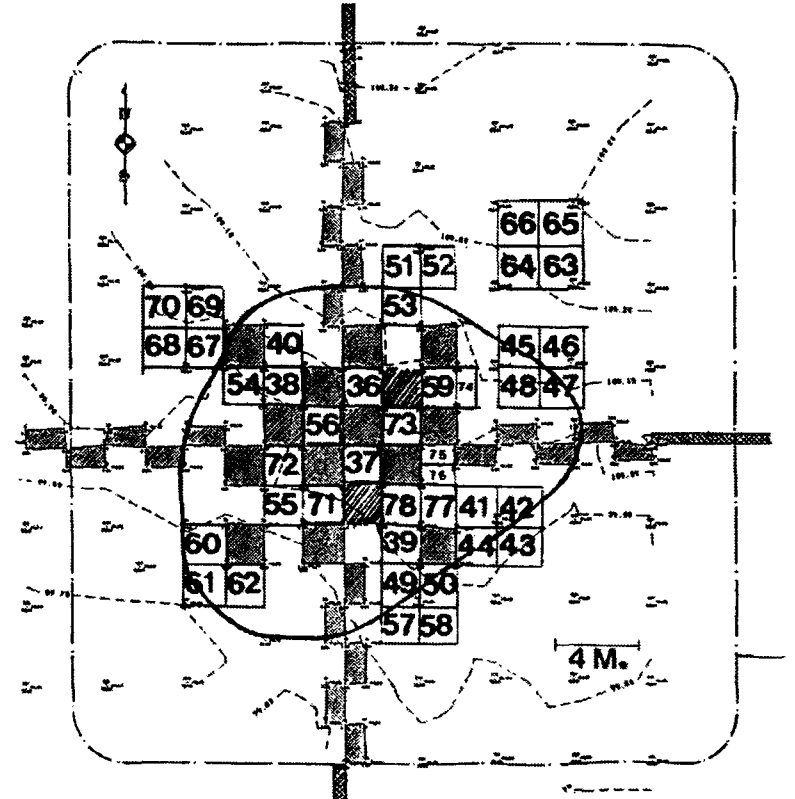


Figure 3. Site Limits and Excavations.



Figure 4. Maruca Site, aerial photo (Sept. 1995).



Figure 5. Dr. Jorge Febles and laboratory assistants.

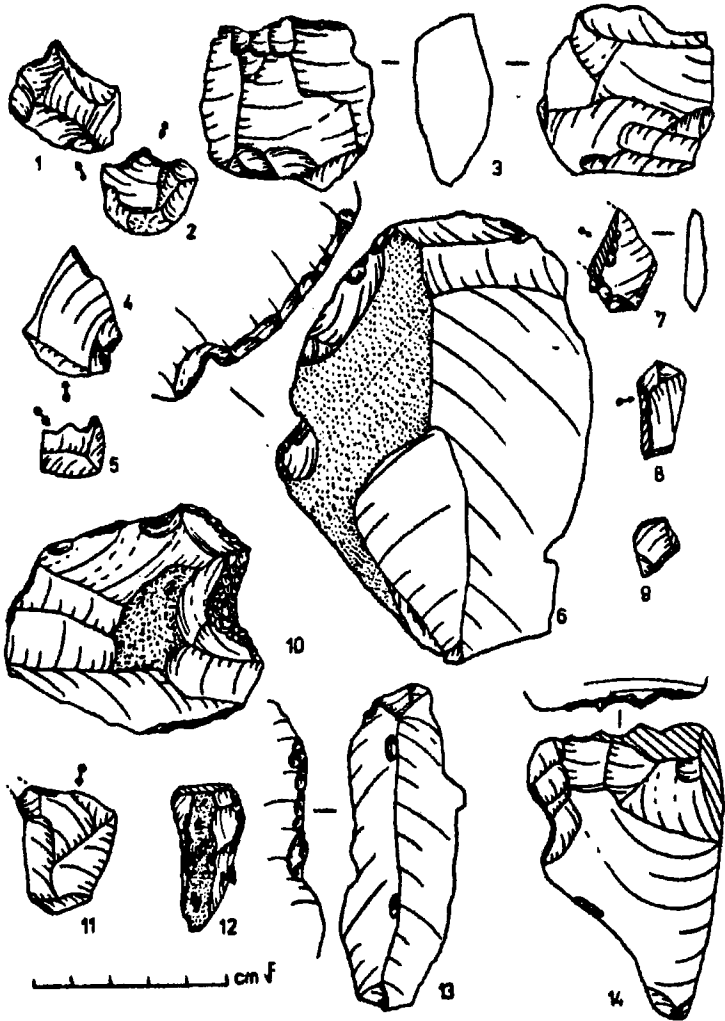


Figure 6. Lithic artifacts from Maruca (drawings by J. Febles).

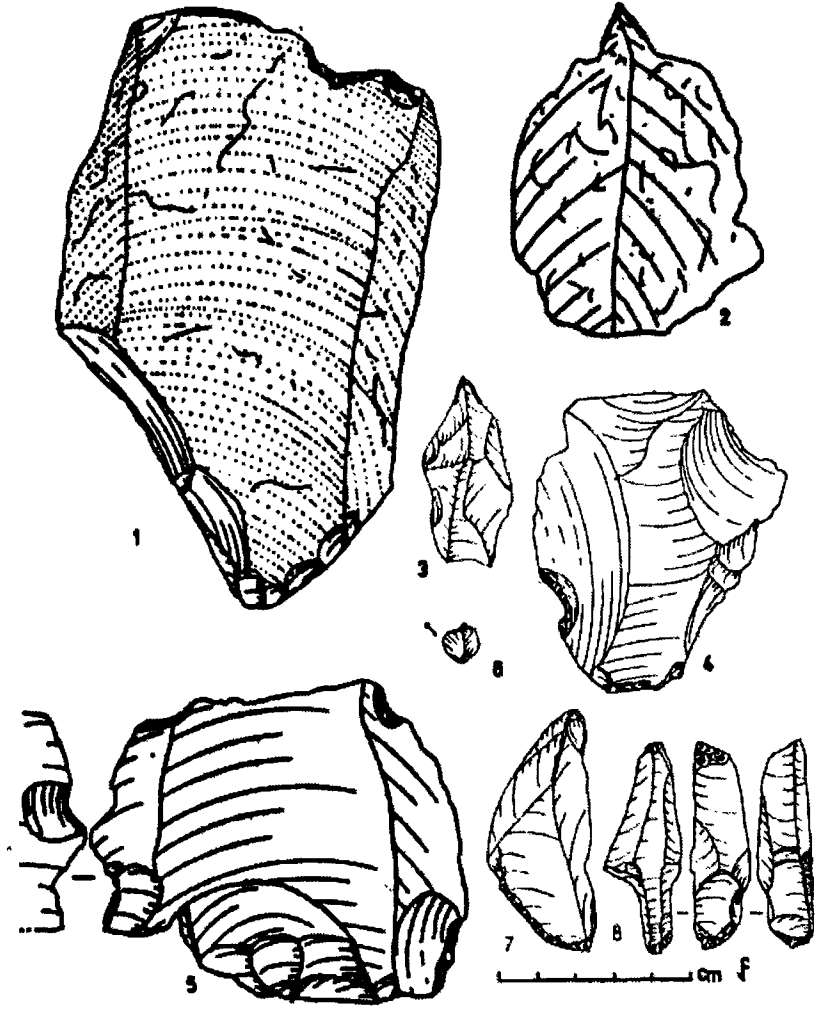


Figure 7. Lithic artifacts from Maruca (drawings by J. Febles).

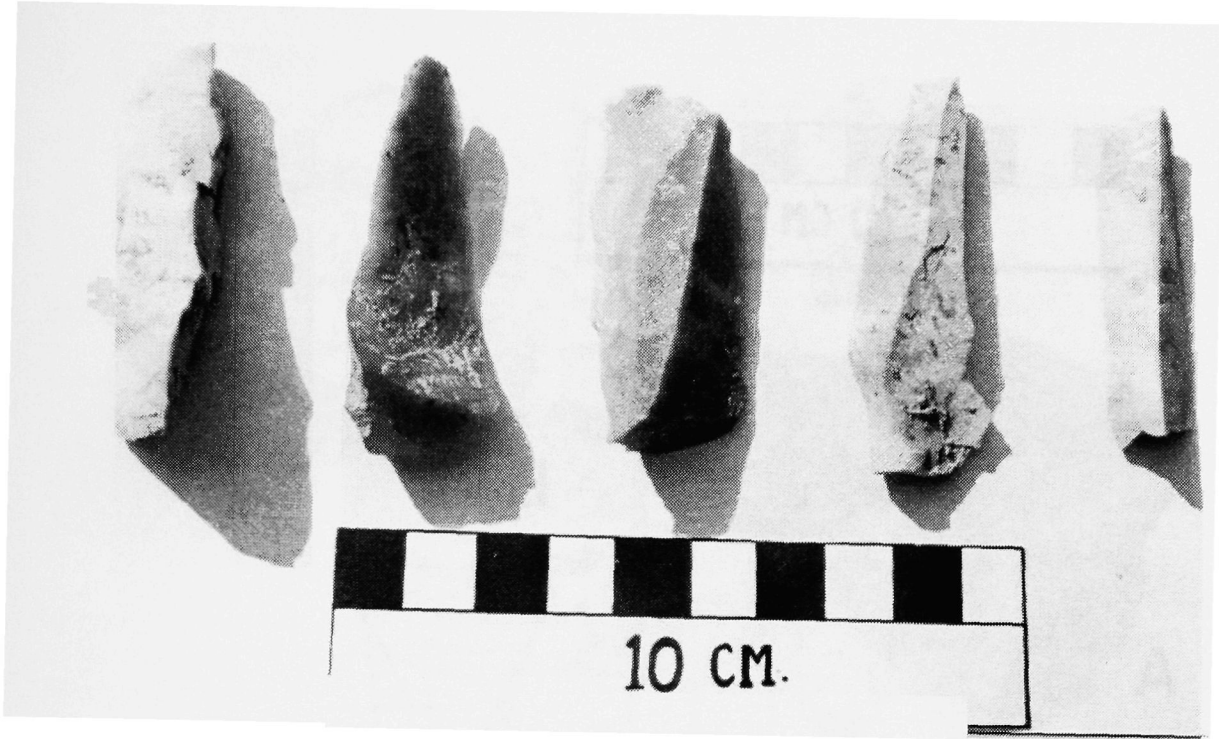


Figure 8. Lamelar blades.



Figure 9. Stemmed points.

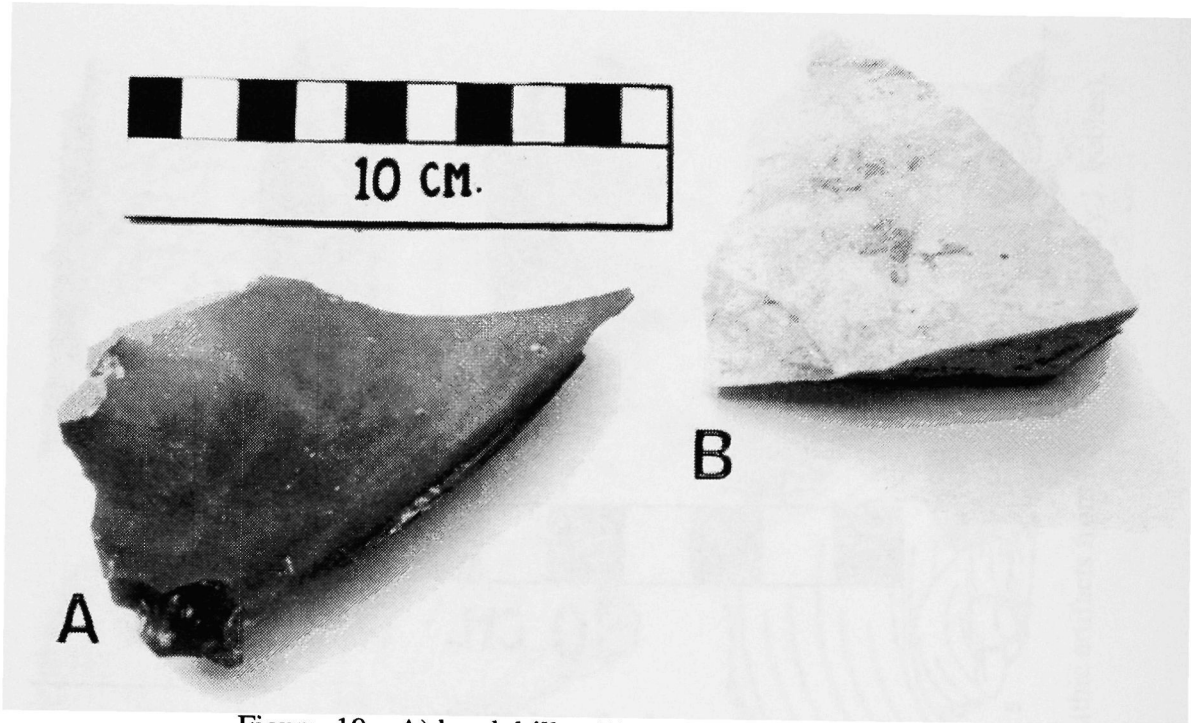


Figure 10. A) hand driller, B) tool with a denticulate edge.



Figure 11. A) edge grinder B) simple conical "mano".

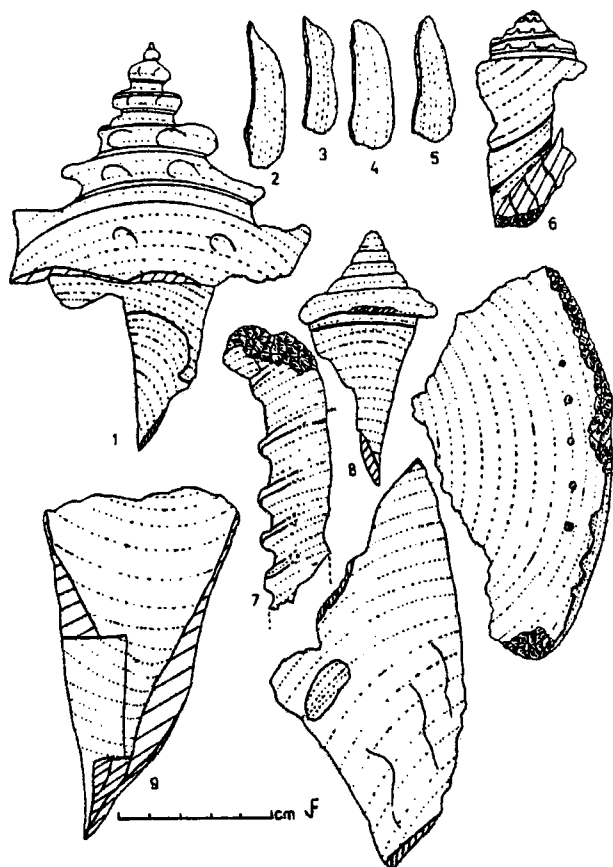


Figure 12. Shell tools (drawing by J. Febles).

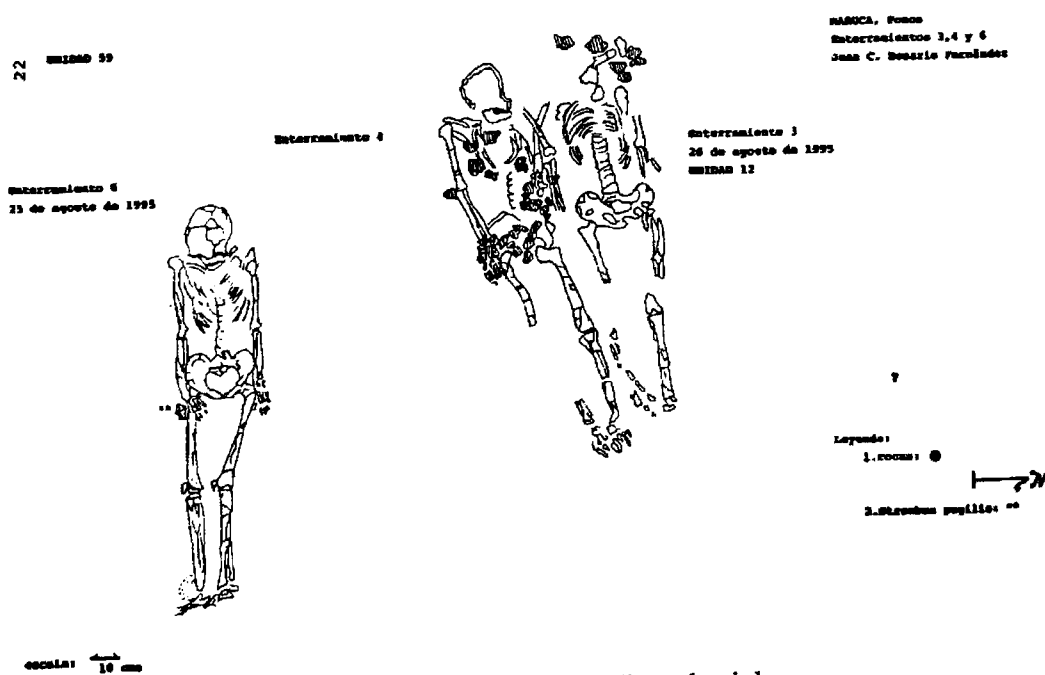


Figure 13. Extended direct burials.



Figure 14. Stone “feature” with two “hammer stones”.



Figure 15. Angel “Chiqui” Colón with the author, explaining the field work procedures to visitors.