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THE PLAYA BLANCA 5 SITE: A LATE PREHISTORIC CERAMIC SITE IN EASTERN PUERTO RICO (A PRELIMINARY REPORT)

LOCATION

In 1989 a new prehistoric site was discovered by Rodríguez (1981) during an archaeological reconnaissance survey requested by the U.S. Naval Station in Roosevelt Roads, Ceiba, Puerto Rico, in connection with a proposed construction project. The site, later named Playa Blanca 5, Ceiba 10, by Tronolone and Cinquino (*Ecology and Environment*, 1985) is located on top of a 50 meter high knoll in the western fringe of Ensenada Honda, the largest and best protected natural bay in eastern Puerto Rico (Fig. 1).

Playa Blanca 5 is in the middle of a dense and almost undisturbed archaeological zone in which at least nine prehistoric sites are clustered (Fig. 1). Amongst these are the Caño de los Indios petroglyph group (Mallery 1893, Lothrop 1935). Ensenada Honda Blanca, two of the sites studied by Rouse (1952) during his early research in Puerto Rico. The other sites have been identified during recent surveys of the area made by Woods (1977), Rodríguez (1981), and Tronolone and Cinquino on behalf of Ecology and Environment (1985). As a rule the habitational sites are located on the uppermost section of a few small rocky knolls, surrounded by mangroves, swamp, channels and wetlands around Enseñada Honda. The area is the closest point between Puerto Rico and Vieques Island, and from the site there is a clear view of the Vieques Sound.

PREVIOUS WORK

In 1984 archaeological studies of the site were conducted by Tronolone and Cinquino (*Ecology and Environment*, 1985), as part of their preliminary reconnaissance survey of the base. The site was then considered as having potential significance for listing in the National Register of Historic Places and a nomination form was prepared (Tronolone and Cinquino, 1985). At the time the Navy decided to active their plan to build new lodging facilities for visiting relatives of stationed personnel on top of the knoll where Playa Blanca 5 site was located. Following a request from the Puerto Rico State Historic Preservation Office, additional research on the site was contracted for by the Navy. Thus, a detailed intensive survey, that included among other aspects the determination of vertical and horizontal boundaries and the identification of the cultural components of the site, was carried out by Rodríguez (1986, 1987).

SITE EVALUATION

As a result of the additional field work we were able to locate more accurately the site and its specific boundaries, using the Universal Transverse Marcator (UTM) grid system. The site was horizontally defined as a leveled, low density open central

area surrounded by four refuse deposits made up primarily of potsherds and shells. These deposits clustered around the slopes of the southern saddle of the hill. Although the site itself was small, covering approximately 1,050 square meters (1/4 of an acre), a larger rectangular area of 65 meters by 55 meters (3,575 sq. mt.) that included a buffer zone was established as boundaries for site protection (Fig. 2).

Data obtained from the test pits on the three domestic refuse areas revealed a late prehistoric occupation of the site. Almost all of the pottery samples obtained were of the Esperanza Style of the Chicoid Ceramic Series with estimated dates between 1,200 and 1,500 AD. In addition, a few sherds belong to the Boca Chica Style of the same Chicoid Ceramic Series and to Santa Elena, the final style of the earlier Elenoid Ceramic Series, with estimated dates from 900-1,200 AD. Refuse accumulation in the slopes was less than 40 cm. deep, but food remains, mostly shells and potsherds were tightly packed in well stratified deposits. Few stone, shell and bone artifacts were detected in the samples. Fragments of glass, earthenware and a 1840's Spanish coin were also found north of the area, thus indicating a historic, -late XVIII Century and XIX Century occupation of the site (Domínguez, 1989). But the leveled area between the deposits was the outstanding feature. Based on our previous research in late prehistoric sites in Vieques Island (Rodríguez y Rivera, 1983) and in southern Puerto Rico (Rodríguez, 1985) this pattern suggested the possibility of finding habitational or ceremonial structural remains on the site.

In our report (Rodríguez 1986, 1987) we expressed our concern for the need to protect this archaeological site. On that basis we recommended the northern half and eastern saddle of the hill, outside the buffer zone, as an alternate construction site. We also suggested the use of a smaller hill a few hundred meters to the east as another possible building site. However, after some consideration the Navy indicated there was no way of avoiding the negative effect of the construction project on the archaeological site. Thus a data recovery program, including systematic excavations on the site, was approved by the U.S. Navy and the Puerto Rico State Historic Preservation Office.

DATA RECOVERY PROGRAM

Based on our previous research on the site we were again commissioned by the contractor to perform the required data recovery procedures. The field work phase extended from March to December, 1988. Excavations initially covered 158 square meters or 15% of the site, and subsequently were extended at our request to include 248 additional square meters for a grand total of 406 square meters, almost 40% of the site area (Fig. 3).

The field work began with the clearing of the dense bush vegetation covering the site. Additional shovel testing along the original one north-south and two east-west main axis revealed a fourth refuse area in the north-western quadrant of the site. Nineteen 2mt x 2mt excavations units, covering 76 square meters, were designed to include the refuse areas. They were distributed according to the relative size and density of each deposit.

Artificial 10 cms. Levels as well as stratigraphic cultural levels were used during excavations procedures. When possible, 1/8 inch screen mesh was employed, but due to the clayish matrix of the soil a 1/4 inch mesh proved the most effective. Soil

samples for flotation test, as well as charcoal and shell samples for radiocarbon dating, were also collected.

CERAMIC ANALYSIS

The preliminary analysis of the deposits confirmed our earlier cultural classification of the site. The artifacts reflect a "Tainan" prehistoric occupation, characterized by pottery of Esperanza Ceramic Style (Rouse 1952) (Fig. 4). The potsherds from three excavation units have already been analyzed with the following results: In Unit B-1, Deposit 2, 96% of the sherds are Esperanza and the remaining 4% are Santa Elena. In Unit B-3, deposit 3, 91% belong to the Esperanza and 9% to the Santa Elena styles. Finally, in Unit A Deposit 4, 94% are Esperanza, 3% Capa and 3% Santa Elena. Nine zoomorphic and anthropomorphic headlug adornos, one of them a rattle, were recovered (Fig. 5). They belong to decorated ceremonial vessels of the Esperanza and Capa Styles. Many perforated clay discs or "spinlewhorls", were also excavated from the deposits.

The presence as minority styles of Capa, Boca Chica and Santa Elena and Monserrate Style pottery sherds (Fig. 6), needs to be addressed. Although probably produced in the site, this pattern could be explained as a result of cultural and social contacts with other "Tainan" villages on the southern and western part of the island, where the Capa and Boca Chica Styles were dominant during late prehistoric times. A minor Santa Elena and Monserrate ceramic component, mixed in the same levels with the Esperanza sherds might be the evidence of an earlier seasonal or short-lived occupation of the site from nearby Santa Elena villages such as Rouse's Enseñada Honda (Rouse, 1952).

CHRONOLOGY

The results of four samples (one charcoal and three shell samples) from the middens sent to Beta Analytic Lab for C-14, were dated as follows:

<i>Samples</i>	<i>Material</i>	<i>Before Present</i>	<i>Calendar Yrs</i>	<i>Range</i>
Samples 1 (31692)	Charcoal	1190 + 90	760 + 90	670-850 AD
Samples 4 (31695)	Shell (Str)	1150 + 70	1150 + 70	1080-1220 AD
Samples 2 (31693)	Shell (Str)	590 + 60	1360 + 60	1300-1420 AD
Samples 3 (21694)	Shell (Str)	450 + 70	1500 + 70	1430-1570 AD

With the exception of the dating obtained from Samples 1, the other three dates, from 1,080 to 1,570 AD fit well within the Santa Elena and Esperanza Styles

chronology for eastern Puerto Rico (Santa Elena: 900 to 1,200 AD, and Esperanza: 1,200 to 1,500 AD). Dates from Samples 2 and 3 (1,300 to 1,570 AD) confirm the very late occupation of this site which might even extended into early Historic times.

SUBSISTENCE

Dietary analysis of the vertebrate as well as the invertebrate faunal samples obtained in the middens shows an active and almost exclusive exploitation of the nearby mangrove and shallow water areas around the Ensenada Honda bay. Mangrove oysters (*Isognomon alatus*, *Crassostrea rhizophorae*) were numerous and sometimes were found in dense layers covering more than one excavation unit. A total of 86% of all shell remains studied from three excavation units were gathered by the inhabitants of the Playa Blanca prehistoric village in the mangroves around the site.

We were also able to identify fish, sea turtles, birds, hutia (*Isolobodon portorricensis*) and manatee (*Trichechus manatus*), among the vertebrate fauna. An interesting fact is that no crab remains were found, even though crab were probably part of the prehistoric fauna and are still abundant in the vicinity of three site.

Agricultural activities based on manioc tubers are also confirmed by the presence of griddles ("burenes o budares"). These made up approximately 2% of the total ceramic samples obtained in the already analyzed unit.

HABITATIONAL UNITS

The research design for the study of the central open space between the deposits included the excavation of four basic trenches, initially divided in 2 x 2 mt. continuous units (Fig. 3, T1, T2, T3, T4). They were excavated using natural levels. Later on, based on the findings on this area, we opened additional excavation units to the south and west of this central space totaling 330 sq. meters (Fig. 3). Finally, under our supervision, a controlled scraping with heavy machinery was made in the remaining areas.

During the excavation of this area the top 40 cm. sterile layer of soil, was carefully removed. Under it a possible aboriginal "living floor" made of the natural underlying soft and yellowish weathered rock of the knoll was detected. We noticed that although the natural surface of the hill is irregular and rocky, very few large or even small rocks were found on top of this clean and leveled "floor". But toward the south-eastern slope of the hill, and covered by Deposit 3, we found a large amount of natural rocks in a manner suggesting they had been thrown down from the top of the site. Also another accumulation of rocks was found toward the southern slope of the hill. Thus, the absence of rock in this central area could be used as an indicator for defining the outer limits of a possible household unit.

FEATURES

More importantly we detected 54 postmolds in this area outlining the structure of a large habitational area (Fig. 4). Also eight (8) human burials, six (6) adults and

two (2) infants were placed around a large oval hearth pit located near the center of the cluster of postmolds (Figs. 7 and 8) (Cashion, 1989). No other postmolds or burials were found outside this area. The six adults were buried in flexed positions, following a definite east-west axis orientation. At least three of them were tightly placed inside excavated grave pits (Fig. 9). The two infants did not followed a clear burial pattern.

A large 2 mt. x 1.70 mt. and 70 cm. deep, egg shaped pit was detected near the center of this area (Figs. 7A, 8). The hearth pit was filled with many Esperanza Style sherds, and a number of fire cracked stones, were mixed together within its dark organic loam matrix. Few shells and almost no bones or charcoal were found inside the pit. Soil samples were taken from the hearth pit for future analysis. The hearth pit was surrounded by five medium size postmolds (Fig. 7C, 8). In addition to this feature, a 50 cm. diameter ring of small fire cracked rocks, was located a short distance, south-west to the hearth (Fig. 7B).

CULTURAL INTERPRETATION

Based on a partial analysis of these materials and features we venture a working hypothesis for the interpretation of the site structure and its cultural identification. The Playa Blanca 5 site represents a rather small, perhaps family-related household unit, inhabited by Taino Indians between the XII and XV Century AD. In order to build a single large house its inhabitants modified the southern saddle of the knoll, the one overlooking Ensenada Honda. In terms of a defensive point of view this location would have given them a commanding and strategic control of the Vieques Channel. Also the prevailing eastern trade winds would have provided them a pleasant breeze, hence protection from the swarms of mosquitoes and other insects from the surrounding mangroves.

It will be very difficult to reach a definite conclusion about the size and layout of the house if we consider only the horizontal distribution and the estimated diameter of the postmolds. Many cultural and natural alterations can occur in this type of structure within a few years. For example, the constant replacement of beams and posts, the enlargement of the house due to the growth of the community, and heavy damage caused by winds and rain from the common tropical storms, just to mention few possibilities. These and other situations might have produced the scatter of visible postmolds.

The original shape of the housing unit, square, rectangular, oval or circular, is also a matter of conjecture if we have only the horizontal distribution of the postmolds. Examples in the literature of circular houses with a conical roof but having a basically square layout of posts are common (Darbois, 1953; Salas, 1971; Coppens, 1983; Chaves y Puerta, 1988). Sometimes the outer shape of the house is defined not by the principal house posts, but by the placement of the exterior walls and by the type of roof. Our own personal experience with comparable examples from Puerto Rico, Venezuela and Guatemala confirms this review.

However, when we study the horizontal distribution of the other related structural features identified in our site, a more clear and logical pattern begins to unfold. For example, all adult burials are located around the central heart between large and medium sized postmolds in a circular or slightly oval pattern. With only one exception (Burial 7, an infant), all the burials are located within a radius

between 2 and 5 meters of both sides of the hearth, suggesting the possibility that the hearth is the central feature of the habitational unit (Fig. 10).

Five medium-sized postmolds clustered around the hearth. We therefore project the house as being circular or slightly oval, with a high pitched central conic roof to allow some of the smoke produced by the hearth to rise. References to cooking areas inside the habitational units are given in the ethnographic literature. Some of them are located toward the entrance of the house, others toward one side and still others in the central part of the unit.

The location of the burials inside the house unit and under the house floor is also common in the archaeological literature and was described in the chronicles as one generalized funerary practice of the Taino Indians of the Greater Antilles. Also ethnographic reports from northern South America indicate that the deceased could be buried under the exact location of their own sleeping hamoc, which was regularly hung between the supporting posts of the house (Thomas, David J., *Estudio sobre los Pemón*. In Coppens, 1983;352).

A second ring or cluster of large and medium sized postmolds are located, coinciding with the burials, in a band between 2 and 5 meters distance from the hearth, indicating the horizontal limits of what we are presenting as the sleeping area of this habitational unit (Fig. 10). Finally, an outer band of postmolds, located between 5 and 8 meters from the center, might be indicative of the last ring of posts of the house structure.

In summary, our analysis suggests that this specific habitational unit may have been circular or oval in shape, having at least three concentric horizontal zones or activity spaces. The inner central part used for cooking, measured an estimated 4 meters in diameter. An intermediate 2 to 3 meters wide "sleeping" space band, also used as a "burial ground", and a third 3 to 4 meter wide "covered activity area" constituted the outer sections of the unit. The total structure would have had approximately 16 meter diameter (Fig. 10).

A smaller diameter can be considered for the house if the clusters of postmolds located to the south and west of the 10 mt. diameter ring are interpreted as being smaller activity structures, such as workshops and storage areas, located around the main habitational unit. This second choice is also the interpretation made by Curet (1989) of the spatial analysis of the clustering and distribution of the post molds of this site. The main structure defined by Curet is a more oval than circular house a with length of 7.14 m. and width of 6.64 m. that generally follows Oviedo's model of an aboriginal "circular" or "hexagonal" house (Fig.11).

FINAL COMMENTS

The excavations and data gathering made by our team at the Playa Blanca 5 site, fulfills and surpasses the goals established in the original scope of work. We hope that future specialized studies of the artefactual and ecofactual samples, the recovered skeletal remains, as well as the habitational and activity features will provide valuable information on the late prehistoric Taino occupation of eastern Puerto Rico.

Recent excavations in the Caribbean have addressed the problem of the archaeological identification of habitational units (Robinson et al, 1983; Versteeg, 1985; Siegel, 1985, Siegel and Bernstein, 1987). Nevertheless, There is still a

fundamental dependency upon descriptions made by Spanish chronicles and ethnographic studies pertaining to tropical forest groups. The archaeological findings at Playa Blanca 5 site supplements both sources and could provide a valid model for the interpretation of other late Greater Antillean small aboriginal sites.

BIBLIOGRAPHIC REFERENCES

Cashion, Maria A.

1989 *Osteological Analysis of Human Skeletal Remains Recovered from Playa Blanca 5 Site, Roosevelt roads Naval Base, Ceiba, Puerto Rico*. Original on file with the authors. San Juan.

Chaves Mendoza, Alvaro y Mauricio Puerta Restrepo

1988 *Vivienda Precolombina e Indígena Actual en Tierra Adentro*.

Fundacion de Investigaciones Arqueológicas Nacionales, Banco de la República, Bogotá.

Coppens, Walter (Editor general)

1983 *Los Aborígenes de Venezuela (Vol. II)* Monografía No. 29, Fundación La Salle de Ciencias Naturales e Instituto Caribe de Antropología y Sociología, Caracas.

Curet, Luis Antonio

1989 *Spatial Analysis of Post Molds from Playa Blanca 5 Site, Ceiba, Puerto Rico*. Arizona State University.

Darbois, Dominique

1953 *Indiens d'Amazonie*. Collection Mondes et Visages, Les Editions Mondiales. Paris.

Domínguez, Lourdes

1989 *Informe Sobre los Materiales Coloniales del Sitio Playa Blanca 5, en Ceiba, Puerto Rico*. San Juan.

Ecology and Environment, Inc.

1985 *Preliminary Cultural Resources Reconnaissance Survey of United States Naval Station Roosevelt Roads, Ceiba, Puerto Rico*.

Buffalo, New York: Ecology and Environment, Inc.

Lothrop, Samuel K.

1935 *Archaeological Sites in Puerto Rico*. Photocopy of manuscript on file with the author. San Juan.

Mallery, Garrick

1893 *Picture-Writing of the American Indians*. (Originally published, by the Government Printing Office, Washington, 1893). Dover Publications, Inc., New York.

Robinson, Linda S., Emily R. Lundberg and Jeffrey B. Walker
1893 *Archaeological Data Recovery at El Bronce, Puerto Rico, Final Report, Phase I*. U.S. Army Corps of Engineers, Jacksonville District.

Rodríguez, Minguel

1981 *Technical Report; Archaeological Reconnaissance Survey for the Community Center Complex (South of Langley Drive)* Prepared for the Department of the Navy, Roosevelt Roads Naval Station; Puerto Rico.

1985 *Camp Santiago cultural Resources survey, salinas, Puerto Rico*. National Guard Bureau and University of Turabo Museum, Puerto Rico.

1986 *Cultural Resources Intensive Survey, Playa Blanca 5, Ceiba 10 Site, Roosevelt Roads; Ceiba, Puerto Rico (Part I)*. On file at the State Historic Preservation Office, San Juan.

1987 *Cultural Resources Intensive Survey, Playa Blanca 5, Ceiba 10 Site, Roosevelt Roads; Ceiba, Puerto Rico (Part II)*. On file at the State Historic Preservation Office, San Juan.

Rodríguez, Miguel and Virginia Rivera

1983 *Sitio El Destino, Vieques, Puerto Rico; Informe Preliminar Actas del IX Congreso para el Estudio de las Culturas Precolombinas de las Antillas Menores Montreal*.

Rouse, Irving

1952 *Porto Rican Prehistory*. In: *Scientific Survey of Puerto Rico and the Virgin Islands*. Volume XVII, Parts 3 and 4. New York Academy of Sciences.

Salas, Julio S.

1971 *Tierra firma (Venezuela y Colombia): Estudios Sobre Etnología e Historia*. Universidad de los Andes; Mérida, Venezuela.

Siegel, Peter E.

1987 *Small Village Demographic and Architectural Organization: An Example from the Tropical Lowlands*. Paper present in the *52nd Annual Meeting of the Society for American Archaeology*. Toronto.

Siegel, Peter E. and David J. Bernstein

1987 *Sampling for Site Structure and Spatial Organization in the Saladoid: A Case Study*. Paper Presented at the *12th International Congress of Caribbean Archaeology*. Cayenne.

Tronolone, Carmine and Michael Cinquino

1985 *National Register of Historic Places Inventory Nomination From: Ceiba 10, Playa Blanca 5 Site*.

Versteeg A.H. and F.R. Effert
1987 *Golden Rock, The First Indian Village on St. Eustatius.*
Publication of the St. Eustatius Historical Foundation.

Woods, Michael
1977 *Survey of Caño de los Indios, Roosevelt Roads~5. Manuscript
on file at the United States Naval Station Roosevelt Roads, Puerto Rico.*

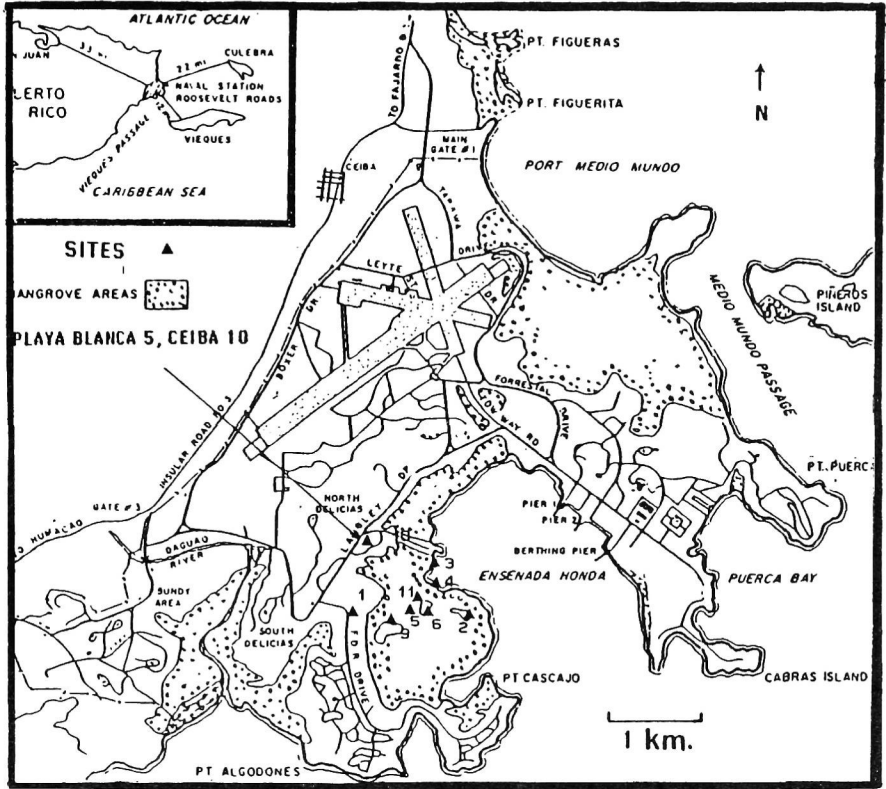


Fig. 1. Playa Blanca 5 Site Location.

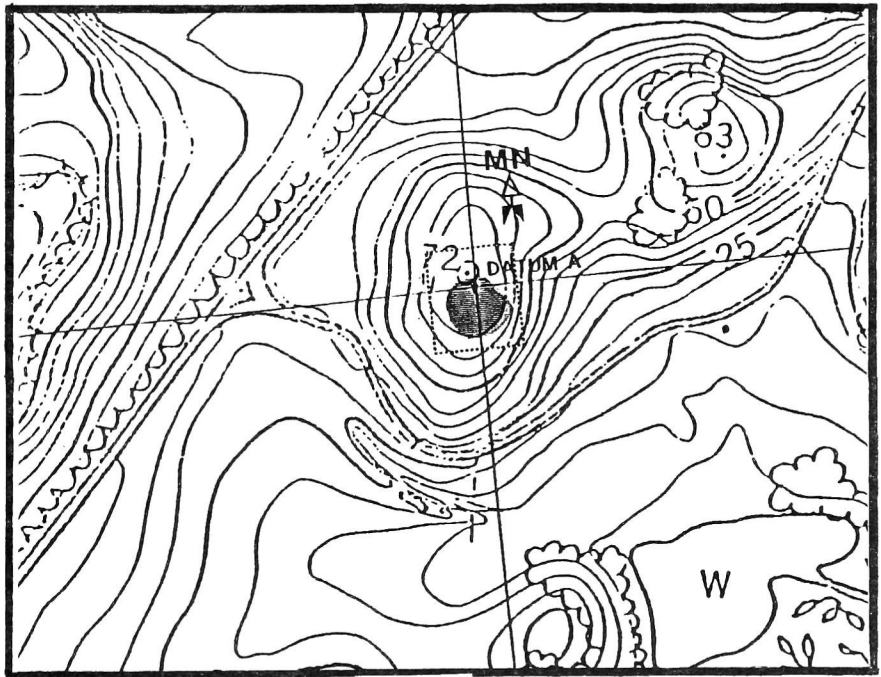


Fig. 2. Site Topography and Limits.

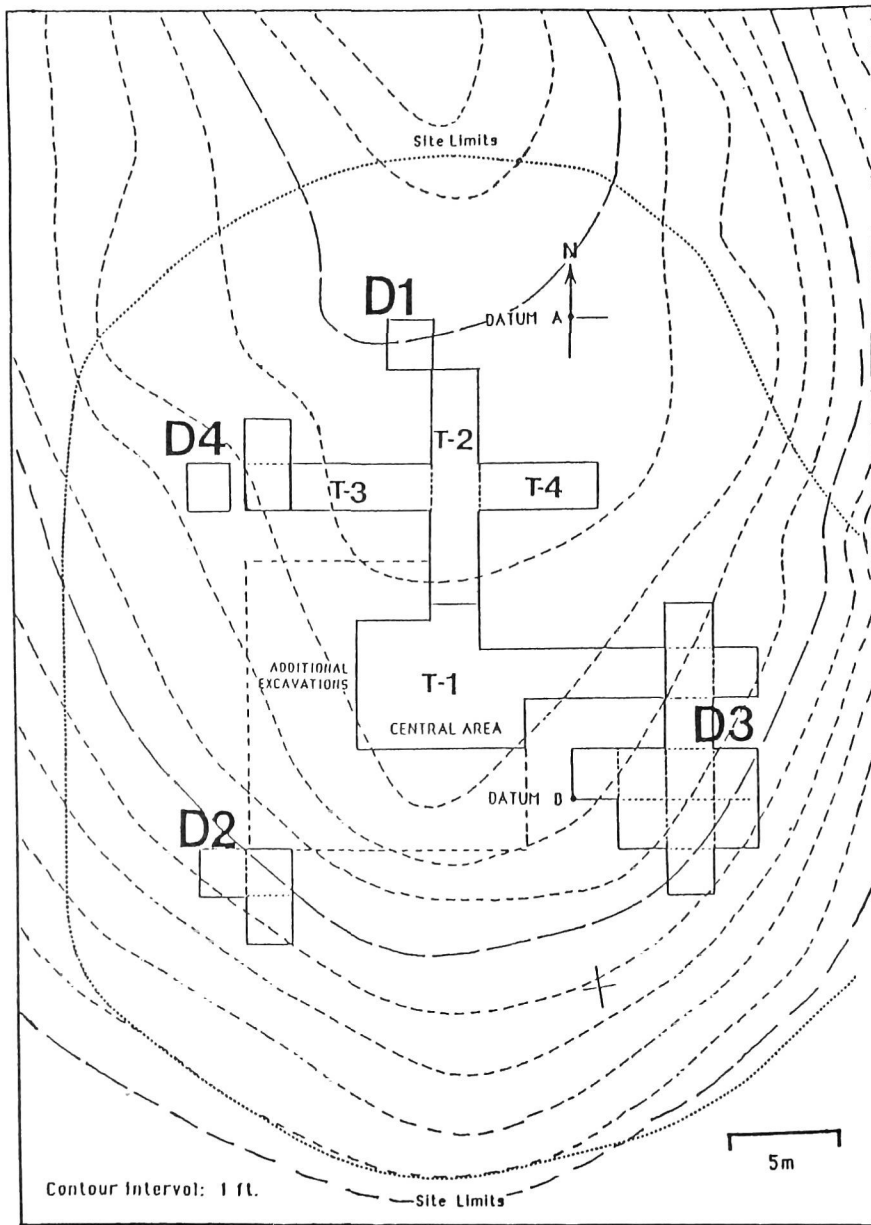


Fig. 3. Playa Blanca 5 Site Map and Excavation Units.

T - Trenches. D - Refuse deposits.



Fig. 4. Esperanza Style Pottery Samples.

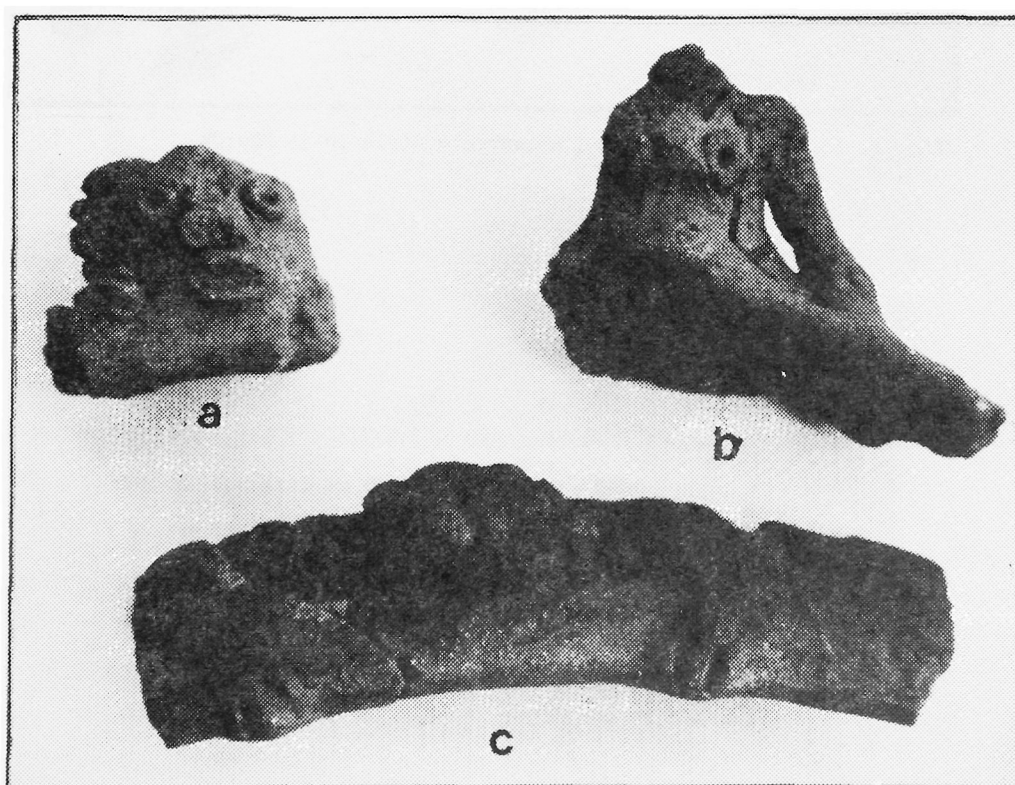


Fig. 5. Anthropomorphic Heeled Lugs.

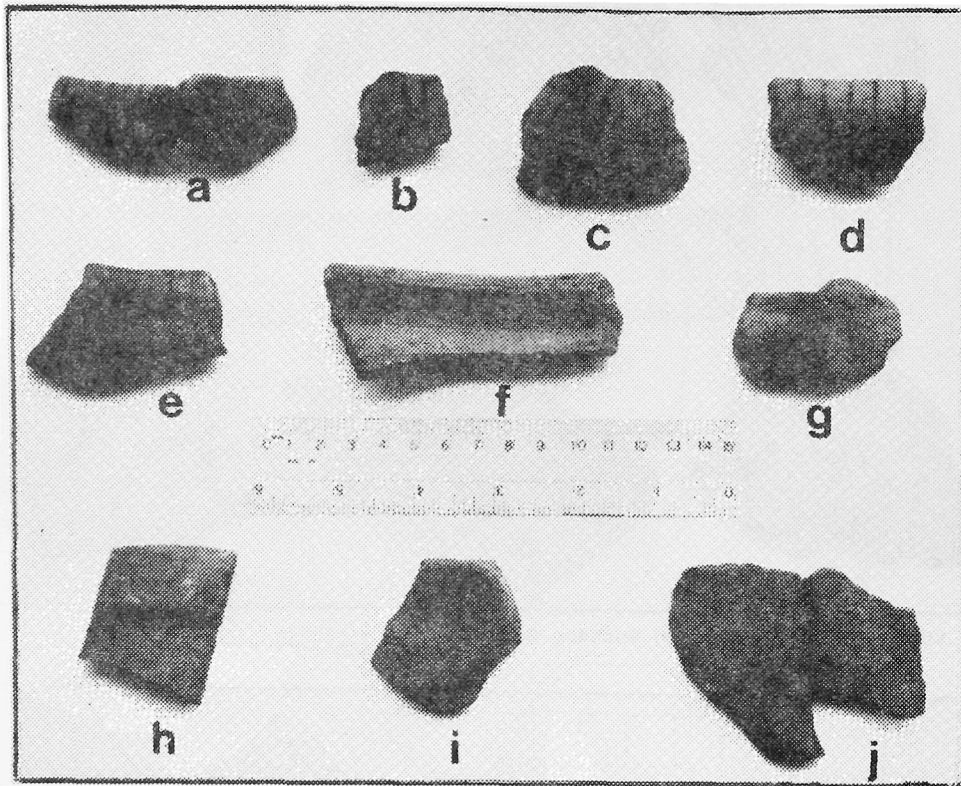


Fig. 6. Santa Elena (a-g) and Monserrate Style (h-j) Sherds.

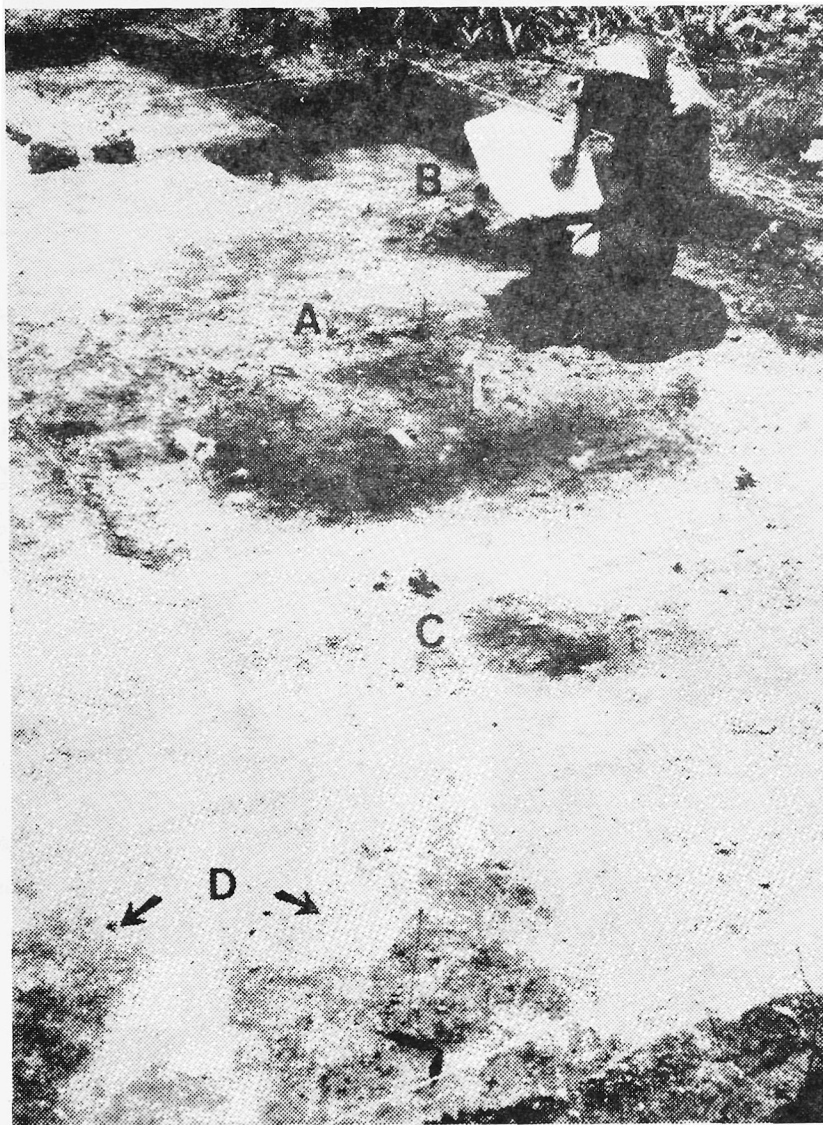


Fig. 7. Features on Central Activity Area.

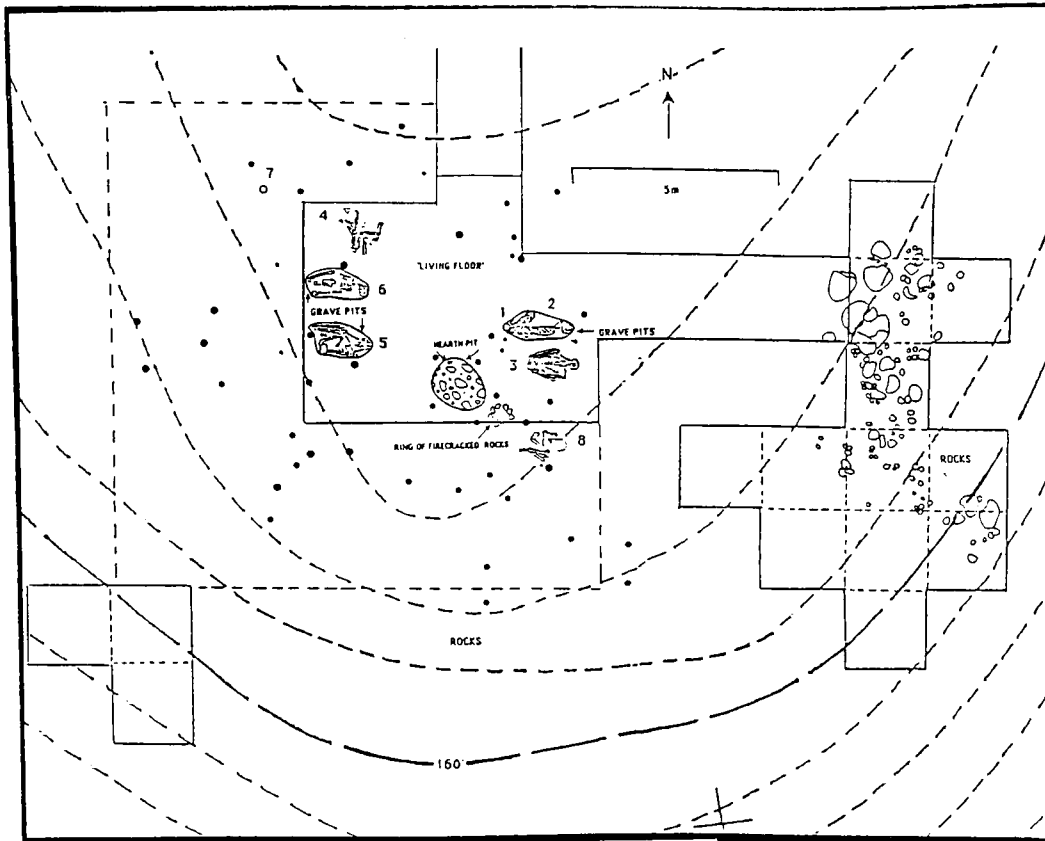


Fig. 8. Location of Features en Central Activity Area.

● Postmolds

○ Infant Burials

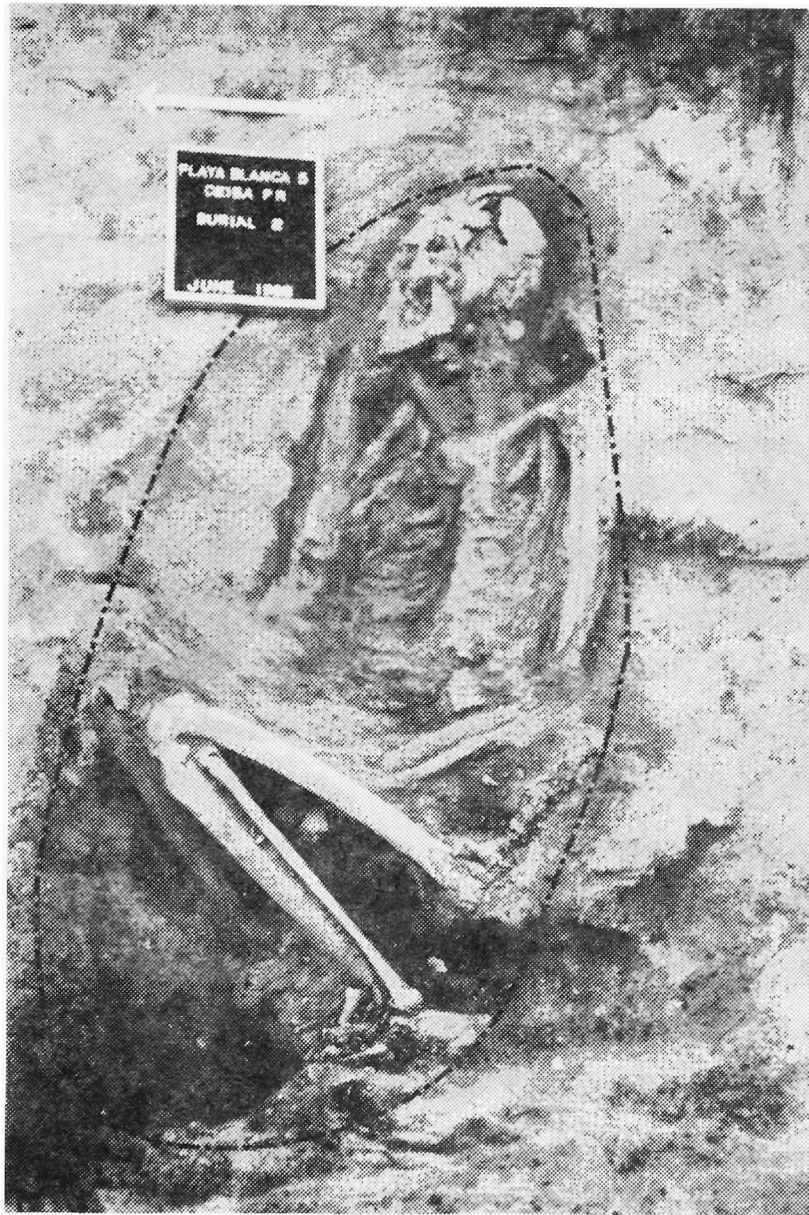


Fig. 9. Burial No. 2 in Flexed Position inside Grave Pit.

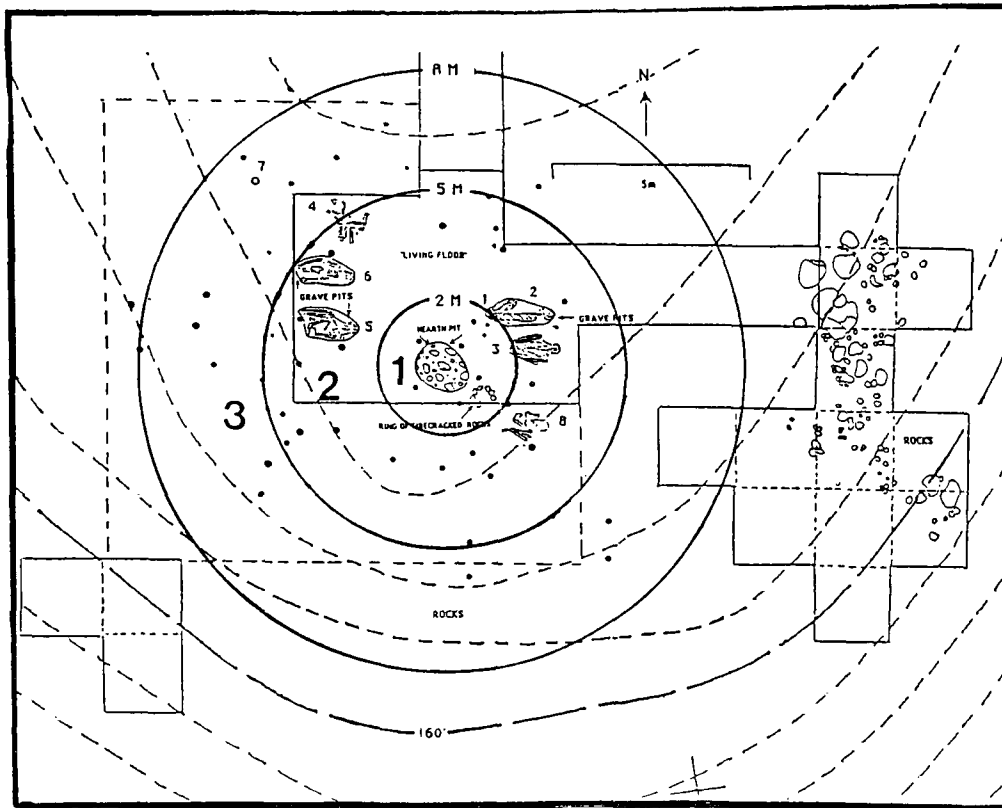


Fig. 10. Horizontal Activity Areas.
 1. Central Cooking.
 2. Middle Sleeping, Resting, Burials.
 3. Outer Other activities

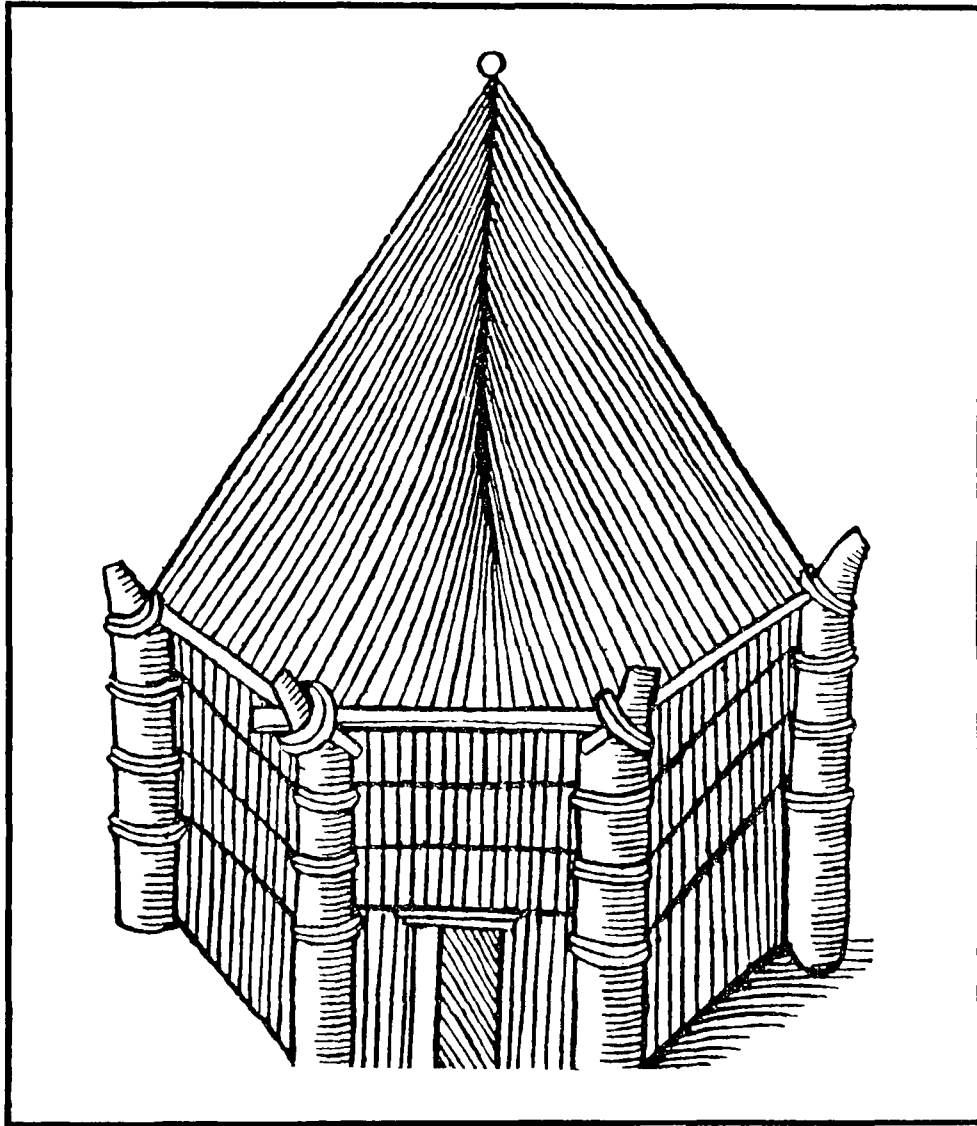


Fig. 11. Oviedo's Model of a Taino "Circular" House.