



LATE CERAMIC AGE DIVERSITY
IN
EASTERN PUERTO RICO

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INTRODUCTION

In various contexts, be they environmental, cultural and political, Puerto Rico has been considered as both the smallest of the Greater Antilles and the largest of the Lesser Antilles. This may only seem to be an entertaining word game, but in reality is not so simple. In an archaeological context Puerto Rico is a large island, as diverse and complex as Hispaniola or Jamaica, and almost 100 times the size of some study units which will be presented in this symposium (Fig. 1).

There are nearly 1,200 officially registered archaeological sites in the files of the Institute of Puerto Rican Culture, of which at least 446 are on the eastern half of the island, our study area. For this reason a brief description of its prehistory, even if chronologically limited to the post-Saladoid sequence (i.e. post-600 AD) and geographically limited to the eastern half of the island, is a task which cannot be fully accomplished in the limited time we have today. It concerns the archaeology of nearly a thousand years of prehistory, in a region of great environmental and geographical diversity, approximately 4,500 square kilometers in size. It is a difficult challenge, but we will attempt to make an adequate and understandable presentation.¹

An additional point which pleases me especially is that the islands of Culebra and Vieques were considered as discrete study units, separate from Puerto Rico. Both islands belong politically to Puerto Rico, but their geography, environment and local population share many ties with the Lesser Antilles, specially Saint Croix. I hope that in the future we will be able to address the archaeology of Vieques and Culebra as two lesser Antilles separated from Puerto Rico, even though always intimately related because of their proximity.

ARCHAEOLOGY OF EASTERN PUERTO RICO

After making the previous two points, I would like to place my presentation in a historic and archaeological perspective, at least as it concerns Puerto Rico. In recent decades the archaeological study programs in Puerto Rico and Vieques have focused on the search for, and study of, the remains of the Cedrosan Saladoids and their close Huecoid cousins. It suffices to follow the discussions and presentations of the proceedings of the IACA, or special publications like those in BAR.

Early ceramic sites have offered ample opportunities for developing long-term projects at sites which have turned out to be progressively earlier each time, with exotic materials and polychrome ceramics, at the same time allowing for an increase of the debate concerning origins, characteristics and lifestyles of early ceramic populations in the northeastern Caribbean, which necessarily includes both the Cedrosan and Huecan Saladoids.²

While this took place, other types of projects have been developing in our region, more low-key and less ambitious. Many of them arise as part of so-called contract archaeology, whose aims are many times limited to complying with the legal requirements concerning the protection and study of cultural resources. In this category we can include two types of investigation: first, the regional surveys sponsored by both state and federal agencies, with the purpose of identification and adequate management of the cultural resources in a particular area; and second, the testing and mitigation excavations of sites whose destruction by a public or private construction project cannot be avoided.³

From the beginning of the 1980's, a number of regional surveys were undertaken, in particular in the eastern region of the island. Amongst the most relevant to our study are those carried out by Walker in 1983 on the Guayanés River system in Yabucoa in the southeast and in 1984 the "Ten Selected Coastal River Mouths in Puerto Rico", which included five lower river basins in the eastern zone. In addition, when I began my work as Director of the University of Turabo's Museum in 1980, we undertook the task of effecting a preliminary survey of the entire Loíza River system, the largest in Puerto Rico, and in whose central zone our university is located. An initial part of this study was presented in 1985 at the XII

Congress of Caribbean Archaeology celebrated in San Juan. In addition, in 1983 I directed a detailed walk-over survey of the Cagüitas River system (Rodríguez, 1984), which is one of the main tributaries of the Loíza River.

In 1984 the University of Turabo's museum was contracted by the National Guard Bureau to carry out an initial survey at Camp Santiago in Salinas, which is the Puerto Rico National Guard's largest training facility and includes an area with hills and valleys amounting to 15,000 acres, of which 15% were intensively surveyed (Rodríguez, 1985).

Recently (Rodríguez, 1990) I completed a systematic reconnaissance of the entire eastern coastal fringe of Puerto Rico for the Institute of Puerto Rican Culture, from Fajardo to Maunabo (Fig. 2). Another relevant study covered the coastal zone of Piñones-Vacía Talega, west of the Loíza River, in which Vélez (1990) systematically explored a sensitive region rich in precolumbian sites. Even though this area had been initially surveyed by me in the early eighties in a preliminary manner, Vélez' study was much more thorough and detailed.

In the same way, in recent years Curet (1990, 1991) carried out a systematic reconnaissance of the Maunabo valley, in the southeast corner of Puerto Rico. This study was focused on the study of the rise and development of the Caribbean chiefdoms, and contributed new perspectives to recent archaeological investigation on the island.

All the surveys which have been mentioned are relevant to the subject which occupies us today since, as can be seen from the maps prepared for this discussion (Fig. 2), they cover ample geographic zones of eastern Puerto Rico.

Insofar as specific studies related to post-Saladoid habitational sites, ceremonial sites or combinations thereof are concerned, the studies have been scarce but no less important (Fig. 2). To mention a few, the excavations at El Bronce by Vescelius and Robinson (1983), Loíza-23 by Grossman & Assoc. (1990), Loíza-19 by Molina (1990) and at Playa Blanca 5 by Rodríguez and Rivera (1989). To start the presentation we shall begin with the data offered by the different surveys, and then we shall enter into details of the information contributed by the study of particular sites, as a way of emphasizing, expanding or debating specific points.

CHRONOLOGICAL AND GEOGRAPHICAL DEFINITION OF THE STUDY AREA

It was in post-Saladoid times that the cultural dichotomy indicated by Rouse in his earlier writings began to manifest itself. Beginning in Period III, the seventh century of our time, the western half of Puerto Rico, which is part of the Mona Passage Area, is characterized by Pure Ostionoid (Period IIIA, dated between 600 to 900 AD) and Modified Ostionoid (Period IIIB, dated between 900 to 1200 AD) ceramic styles. Both styles form the Ostionoid Series for western Puerto Rico, which has its type site at Punta Ostiones, in the southwest of the island. During that same Period III, the eastern half of Puerto Rico, together with Vieques and the Virgin Islands, form the Vieques Sound Area (Fig. 3). Its ceramic belongs to the Monserrate style (Period IIIA, dated between 600 to 900 AD) and Santa Elena style (Period IIIB, between 900 and 1200 AD). These two styles form the Elenoid Series for eastern Puerto Rico.

For Period IVA, which spans from 1200 to 1500 AD, the division of Puerto Rico into two main interaction zones, the Mona Passage Area to the west with Capá-style ceramics and the Vieques Sound Area with Esperanza-style ceramics, still holds even with some variations. For example, some intrusions by the Boca Chica style have been identified, particularly on the south-central coast of the island, in places identified as Boca Chican "ports of entry", in the literature. The Boca Chica style originates in Hispaniola, and gives its name to the Chicoid Series, which includes the three styles indicated for the island: Capá, Esperanza and Boca Chica.⁴

The geographic boundaries don't seem to be the same for both chronological periods, and presents broad crossover, influence and incursion zones amongst them. This is not only a fact, but seems a logical situation. The initial division of Puerto Rico into two large influence zones or areas must be understood as dynamic, in light of later archaeological investigations. For example, on the south coast there is no clear boundary between the Ostionoid and Elenoid sites. Some typically Ostionoid sites from Period IIIA, such as Collores, are found to the east of primarily Elenoid sites such as Tibes. Another site, Cagüitas, in the east-central section of the island, presents up to 25% of its ceramics in the Pure and Modified Ostiones styles during Period III occupation, while the majority belong to the Monserrate and Santa Elena styles. In general terms, my impression is that during Period III occupation,

and particularly Period IIIB, the Vieques Sound Area extended over two thirds of the island, limiting the Mona Passage Area's extension to only the western third of the island (Fig. 3)

As to the geographic extension of the influence areas in Period IVA, the division is also not precisely clear, even though the Esperanza style dominates the eastern half. In some cases, specifically sites in the interior of the island, Capá ceramics tend to be predominant in zones even further east (Fig. 3). But to define clear ceramic frontiers during Period IVA is no easy task if we consider that both main styles, and also the Boca Chica, share many common elements, and thus belong to the same ceramic series. It should be much more difficult to define geographic limits between styles of the same series than between styles from different series, as is the case of the Ostionoid and Elenoid series.

ARCHAEOLOGY OF THE LOIZA RIVER BASIN

The Loíza River Basin survey (Fig.5A), which incorporated the results of the Cagüitas River survey, identified 35 habitational sites with 58 ceramic components. Of these 6 are Cedrosan Saladoid: 1 Hacienda Grande, corresponding to Period IIA, and 5 Cuevas from Period IIB; 31 Elenan Ostionoid components, of which 7 are from Period IIIA Monserrate style and 24 from Period IIIB with the Santa Elena style; and finally, 21 sites during Period IV, with ceramic components associated with the Esperanza style.

PERIOD IIA AND IIB (250 BC - 600 AD)

For Period IIA there is only one early Cedrosan Saladoid cultural occupation, at the Hacienda Grande site, which is located in the lower basin of the river system, with three C-14 dates associated with this first ceramic occupation, ranging from 180 BC to 200 AD (Table 1). The Hacienda Grande occupation was a large village site, composed of various refuse heaps distributed in a circle around a central area which must have been its central plaza.

In Period IIB, four late Cedrosan Saladoid occupations with Cuevas ceramic components, the second and last style of the Saladoid series in Puerto Rico, were found: one on each side of the delta, the third at Hacienda Grande proper and the fourth at the Cuevas type site in the middle basin, towards the interior hills of eastern Puerto Rico (Fig. 5B) These four are large habitational sites, insofar as size is concerned, and follow the same circular or horseshoe-shaped habitational pattern around a central area which might have served as a ceremonial plaza, domestic activity area and burial ground.

Though the great majority of the aboriginal population in this period was concentrated in the lower and middle basins, an advance group penetrated into the interior of the region, and represents the earliest occupation of the interior of Puerto Rico. The three dates related with this component range from 290 AD at the Hacienda Grande site to 590 AD at the Cuevas type site.

At the end of Period IIA, around 600 AD, we find a large Saladoid population concentrated in large settlements in the region, with a well-defined internal organization pattern. At Punta Candeleró, to the southeast, the Period IIB Cuevas settlement possesses a definite semi-circular shape, with numerous large dwellings around a central plaza, which in turn served as a burial ground. Its ceramic production is very homogeneous and stereotyped, a characteristic which in my judgement reflects a strong internal social structure and close relations between the settlements.

PERIOD IIIA (600 - 900 AD)

We arrive at the first post-Saladoid period, Period IIIA, in which human occupations are associated with the Monserrate-style ceramics, the first of the Elenoid Series in eastern Puerto Rico as part of the Vieques Sound Area. In chronological terms its time span is indicated between the years 600 and 900 AD, based on a date of 710 ± 80 , obtained at the Monserrate type site (Table 1). Two additional dates recently obtained by us at sites in the Loíza River system tend to confirm the general chronology established for Monserrate and therefore for Period

IIIA. These are: 800 AD, obtained in a sector of the Cuevas site in the middle basin with Monserrate ceramics; and 960 AD, associated to a Monserrate ceramic component at the Cagüitas site in the upper basin (Table 1).

Grossman & Assoc's. (1991) recent study at the L-22 Elenoid site included two dates from shell samples, one of which, 425 ± 75 AD, seems too early for Santa Elena style ceramics; but the second one, 725 ± 75 , is compatible with the dates for the Monserrate ceramic component in other sites in the region (Table 2). Three other dates, obtained at the Collores site on the south-central coast by Veloz Maggiolo in 1975, are 745, 825 and 885 AD, associated to a mixed Monserrate/Early Ostiones component of the site (Rodríguez, 1983).

The geo-political panorama in our zone suffered visible and notable changes in this period. Of the 58 total occupations identified, only 7 (or 12%) are Monserrate. The coastal settlements' growth from Period IIB halted or was reduced, and in some cases disappeared, and new, very discreet occupations began near the older settlements. There was also movement in the middle basin and new, smaller settlements were begun in the higher areas of the main tributaries in this region. The population of the upper basin slowly increased, but no new settlements were founded. The events of this period are confused and there is no evidence of continuous cultural development. For example, now the villages seem to have been composed of individual or isolated habitational units, and do not reflect an organizational pattern as seen in Periods IIIA and B.

It has been said that the ceramic production associated with these settlements, the Monserrate-style ceramics, reflects elements of the Saladoid ceramics, as can be seen in its good quality and the use of paint. But new decorative elements are also present, such as painted strips of red, buff or black paint in negative geometric designs, almost always inside the pottery, and the smudging technique. There are some rectangular vessel shapes, with slightly annular bases and very diagnostic round lips, which also bring to mind certain Saladoid vessels of similar shape. Domestic pottery includes boat shapes and has large loop handles which stand out from the rim, similar to the domestic vessels of the Ostionoid Series styles in the Mona Passage Area. The Monserrate style totally lacks any incised design and has very few anthropomorphic or zoomorphic handles or modelled lugs. More than one archaeologist has pointed out, with valid reasons, that the characteristics of the

Monserrate style bring it closer to the Saladoid and Ostionoid traditions than to the Elenoid family, a final rather than transitional Saladoid style. This proposition merits further investigation and analysis.⁵

PERIOD IIIB (900 - 1200 AD)

During Period IIIB, 24 sites were identified with Santa Elena style pottery, constituting 41% of the total. All those sites where a Monserrate component was previously present experienced a marked growth, in some cases becoming first order settlements, such as site L-14 on the delta and the Cagüitas site (CS-2) in the upper basin, with numerous domestic residue deposits, habitational and human burial areas. Distributed around these large Period IIIB settlements we find smaller sites with Santa Elena ceramics which seem to conform to a nuclear model, in which the central settlement is surrounded by smaller settlements which could be isolated dwellings or places for specialized activities related to fishing or agriculture, as may be (Fig. 4). In addition, some Santa Elena occupations are distributed practically on top of dune formations on the shoreline or at the edge of swamps and lagoons, all of these particularly concentrated along the coastline.

This extensive and intensive Santa Elena occupation during Period IIIB represents, in our judgement, the moment of greatest population density and human activity in all the prehistory of the eastern region of Puerto Rico. Other studies in the region confirm this indication. For example, Vélez (1990) identified 32 out of 41 (or 78%) of the ceramic occupations in the study area as pre-Taínan, associated with Santa Elena ceramics in his Vacía Talega-Piñones sector of the lower basin of the Loíza River. In our study of the eastern coast (Rodríguez, 1990), 44 out of 67 (or 66%) of the ceramic occupations were associated with the Elenoid component, mostly with the Santa Elena style. The Camp Santiago study in the southeast coast of the island (Rodríguez, 1983), 18 out of 25 (or 72%) of the ceramic occupations were also associated with the Santa Elena style. The Santa Elena phenomenon is a generalized one in the eastern region of the island, and in the Vieques Sound Area.

Some of the Santa Elena settlements in the northeast and southeast of the island have ballcourts clearly defined by lines of stones, some of which are carved with simple petroglyphs. This incipient ballcourt development reaches its maximum expression at the Tibes Ceremonial Center, in the south-central region of the island, where more than a dozen structures, including plazas and ballcourts, are without doubt associated with a Period IIIB Santa Elena ceramic component. These are not coastal, marsh or mangrove-related Santa Elena occupations, but rather intermediate settlements in the interior hills and valleys, where Elenoid sites were very numerous.

We have at hand a series of recent and quite reliable dates associated with the Santa Elena component. The two initial dates for the Santa Elena site, the type site for the style found on the north coast, are 890AD \pm 80 and 1210 \pm 80; two dates for the Santa Elena component of the Cagüitas site, 1080 \pm 80 and 1090 \pm 80; two dates from the La Plena site, an Elenoid site in the southeastern hills, 850 \pm 80 and 915 \pm 80; and three dates for the Santa Elena component of the Tibes Ceremonial Center in Ponce, 740 \pm 80, 765 \pm 80 and 1290 \pm 80 (Table 2).

The Santa Elena ceramics are without a doubt the coarsest and thickest of any style identified in Puerto Rico. Their domestic open vessels are numerous and large in size, a characteristic that could reflect the population increase registered for this period. The majority of the Elenoid vessel shapes are simple hemispheres or slightly ovoid, even though there are also large boat-shaped vessels with high loop handles. Some handles are D-shaped and others are vestigial, on occasion finished with panels of incised parallel lines, with strips of clay applied to them, and including some modeled zoomorphic and anthropomorphic figures. In some cases the incisions are criss-crossed or a combination of vertical and horizontal lines, similar to some designs of the Mellacoid ceramics found in the Dominican Republic. One diagnostic characteristic is that, in the majority of the vessels, the last strip of clay forms a very thick lip which can be detached in the manner of a cylinder. We do not know of any Elenoid jars or bottles, and effigy vessels are scarce. Neither is there any kind of painted decoration.

PERIOD IVA (1200 - 1500 AD)

This period of Puerto Rican prehistory corresponds to the development of the Taínan Culture, the culture of the aborigines which inhabited the Greater Antilles at the time of the European discovery and conquest, towards the end of the fifteenth century.⁶

We have identified 21 components characterized by Esperanza-style ceramics during Period IV, which represent 36% of the total for the entire system. In general terms, both the total and percentage are very close to those previously noted for the prior Santa Elena style occupations in Period IIIB. However, and as we shall see further on, there exist marked differences between both settlement patterns. Vélez' study of a coastal sector of the Loíza River indicates that the Period IVA Taínan occupations represented 20% of the total. In the Camp Santiago study, to the south, I considered 28% of the occupations as belonging to Period IVA, with added evidence of movement towards the mountains in the interior. Finally, 21% of the occupations evaluated in the eastern coast survey belonged to Period IVA. The relatively low percentage of Taínan occupations in these three studies, compared to the Loíza River survey, is due to the fact that they did not include mountainous regions or valleys in the interior, where Period IV occupations are more numerous, whereas the Loíza River survey included both.

The numerous small, Period III Elenoid occupations running the length of the coast in the lower river basin disappeared. Only large Taínan occupations in large and older Elenoid sites subsisted. The ceramics from these places are a very decorated Esperanza style, but with a minor presence of Capá and Boca Chica ceramics, some locally fabricated and others as an example of exchange and commerce with other places. It is possible that ballcourts existed in these places, but because of their location on the coast, agricultural practices did not allow for their adequate preservation. At the same time, new small and medium-sized occupations centered on the mangroves and lagoons, many of which presented isolated and/or individual dwellings, developed in the coastal interior.

Something very particular occurs in the middle basin of the river system: the very same settlements that were founded during Period IIIA and continued growing during Period IIIB now became Taínan settlements. These sites show a

preponderance of Esperanza ceramics, with some minor Capá and Boca Chica components, and ceremonialism manifested by the presence of ballcourts surrounded with monoliths, human burials, and massive art stone-work. One of these sites, Cuevas 2 in Trujillo Alto, had at least 5 ballcourt, and must have been the most important ceremonial location in the entire northeast and east-central region of Puerto Rico during Period IVA.

Meanwhile, in the upper basin of the river system, some of the small Elenoid occupations disappeared, and new small Taínan occupations arise around the old, large settlements of the previous period, as is the case at the Cagüitas site. A large Taínan settlement also existed in this place, characterized by large dwellings, Esperanza ceramics with minor Capá and Boca Chica components, human burials, ballcourts and ceremonialism. For the first time in the prehistory of the river system, during Period IVA the majority of the occupations are located in the upper basin, in the mountains and valleys of the island's interior. This seems to represent the culmination in Period IVA of the gradual movement towards the interior which began in the latter stages of Period IIB, between 400 and 600 AD.

The nuclear model we described for some large sites during Period IIIB appears to repeat itself, particularly in the Cagüitas River sub-system which we studied in detail in 1983. Around both the Period IIIB Elenoid and Period IVA large settlements are circled by small habitational sites or agricultural and activity areas, including river petroglyph sites that could have been used for religious activities.

Another settlement pattern can be observed in the coastal area of Ceiba, around Ensenada Honda in the east of Puerto Rico, where the authors recently excavated a small, single-dwelling Period IV habitational site with Esperanza-style ceramics (Rodríguez & Rivera, 1989). The environmental and topographical conditions of the area do not allow for a single large settlement, and for this reason small settlements are found on the heights of various adjoining hills, some of which are from Period IIIB and others from Period IVA and are composed of individual habitation sites, which as a group could represent a settlement.

The estimated chronology for Period IVA in Puerto Rico is placed between 1200 and 1500 AD. We do not have specific dates for the Period IV occupations in the lower basin of the Loíza River. But for the Taínan occupation of the middle

basin ceremonial site, TA-2, we have a date of 1440 ± 80 AD, which gives us a range between 1360 to 1520 AD. It is interesting to note that we also recovered a Spanish copper coin at the site, worth 4 maravedis and minted in Seville in 1502 for circulation in the New World -- one of the oldest excavated in the Caribbean, which could possibly extend the occupation of the site to Period IVB. For the Taínan occupation of the Cagüitas site, which is the largest site in the upper basin, we also have a late date of 1610 ± 80 (1530-1690 AD) associated with Esperanza ceramics, which could extend the habitation of the site to Period IVB (Table 1).

Finally, we can mention the three dates obtained at the Playa Blanca site clearly associated with the Taínan occupation of the site during Period IVA. These are 1150 ± 70 , 1360 ± 60 and 1500 ± 70 AD, respectively (Table 2). The initial dating could be considered as being somewhat early though reasonable, and the third would extend the Taínan occupation up to Period IVA. The repeated late dates, which place human presence at these sites well into the sixteenth century, are explainable given that the eastern zone of the island was the last to be conquered and colonized by the Spaniards. As a matter of fact, after the initial victories against the aboriginal population, the region was practically forgotten, a sort of "no-man's land", well into the sixteenth century when some Spanish nuclei were reestablished in a more permanent manner.

As we have said, Esperanza-style ceramics are predominant in all Period IV occupations in the eastern half of Puerto Rico. In large settlements with vestiges of ceremonialism there is also ample evidence, however minor, of Capá and Boca Chica ceramics. The exceptions are the so-called "ports of entry" on the south-central coast, like Cayito in Santa Isabel. At these sites the dominant ceramic style is Boca Chica, with Capá and Esperanza ceramics as minor components.

Esperanza ceramics are technologically superior to Capá ceramics, while both are inferior in turn to the Boca Chica. Only simple hemispheric forms and some zoomorphic and anthropomorphic representations are found. The decoration is incised and its designs consist of combinations of angled parallel lines, semi-circles, dotting and linear segments engraved towards the upper edge of the vessel's exterior. There are no loop handles known for the Esperanza style in eastern Puerto Rico, but on occasion appendages applied in the way of legs and hands can be found, besides small, simple incised and modelled heads. On few occasions fragments with

Esperanza decoration and red slips have been identified, which could represent an influence of the Modified Ostiones style from the Mona Passage Area to the west. These ceramics include manioc griddles, perforated disks, some male and female figurines and simple body stamps.

CLOSING REMARKS

We have attempted to present a concise synthesis of the population migrations and cultural diversity in eastern Puerto Rico throughout time, ranging from 600 to 1500 AD. From the data presented we can arrive at some tentative propositions:

- 1) In general terms, both the periods and chronology established by Rouse for the area are validated by more recent findings. However, occupations at specific sites can evidence local variations.
- 2) The study of occupations with Monserrate ceramics in Puerto Rico deserves special attention due to their limited geographic distribution. There are still no clear criteria for placing the Monserrate style within the Saladoid Series, for which reason it should remain as it is, under the Elenoid Series.
- 3) As to geographic extension, during both Period III and IV the Vieques Sound Area extended to nearly two-thirds of the island, east of Arecibo on the north coast and east of Ponce on the south coast.
- 4) The ceramic population movement towards the interior of the island began in Period IIB, between 400 and 600 AD, using the large river basins, such as the Loíza River, as entry routes. However, it was during Period IIIA (900 to 1200 AD), with the Elenoids, that true human settlement of all the ecological zones of the region occurs. It was possibly the moment of greatest population density on the island, especially in the east, in precolumbian times.

- 5) A tendency towards more numerous and complex settlements in the middle and upper areas of the river systems can be observed at the end of the cultural sequence, during Period IVA.
- 6) The model represented by a large and complex settlement, with various smaller settlements and special activity areas scattered around it, begins during Period IIIB (900-1200AD), the pre-Taínan Culture. It continues in a more concentrated manner during Period IVA of the Taínan Culture.
- 7) During Period IVA, groups of habitational units appear to have existed which, even though apparently isolated and individual, functioned as regional settlements.
- 8) The great majority of sites where well-defined ballcourts and ceremonial complexes existed later on were occupied almost from the beginning of the ceramic sequence, or at least from Period IIB, when they possibly had simple central plazas. These were consistently the large settlements throughout the sequence, which supports Rouse's linear development model.
- 9) It is still unclear who constructed the ballcourts and when, since there is both abundant Period III and IV occupational evidence in them. I suspect that maybe two ballcourt construction and usage episodes occurred. The first, during Period IIIB and perhaps as late as IIIA, was one of small and simple plazas. The second, during Period IVA, was one of large plazas and ceremonial centers such as Cuevas 2 in Trujillo Alto.
- 10) The presence of diverse settlement types and sizes, and differences in the extent and complexity of ceremonialism at each site suggests a hierarchical model of interrelated settlements for each of the subregions of a large hydrographic system such as the Loíza River's.

These points provide a glimpse of the complexity of the symposium's theme subject. To clarify or add to what has been presented we have included a graphic presentation: maps, diagrams, tables, drawings and archaeological materials. I hope my presentation may be a valid contribution to the study of both Puerto Rico and the Caribbean's precolumbian past.

NOTES

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- 1— In addition, Puerto Rico has been the most intensely studied Caribbean island from an archaeological standpoint, with studies by both local and foreign investigators dating from the end of the nineteenth century. The local biography we attempted to review for this presentation consists of 36 titles. It also includes academic studies, graduate dissertations and theses from Puerto Rico and the U.S., research projects undertaken or sponsored by governmental agencies both in Puerto Rico and the U.S., and finally, a large number of reports produced by so-called contract or commercial archaeology, carried out in accordance with the statutory and legal requirements for the protection and study of the archaeological and cultural heritage of Puerto Rico.
- 2— We find specially important the investigations carried out by Chanlatte and Narganes, from the University of Puerto Rico Museum, both at Sorcé/La Hueca on Vieques and in Tecla, Guayanilla, on the south coast of Puerto Rico; in Rouse and Alegría's updated publication about the 1950's excavations at Hacienda Grande in Loíza and the recent work by Roe with students from the Center for Advanced Studies at the same site and also at the Monserrate site in Luquillo; in the Maisabel project, a site on the north-central coastline of the island, sponsored by the *Centro de Investigaciones Indígenas de Puerto Rico* and developed under the direction of Roe and Siegel; and more recently, the extensive excavations carried out by Rodríguez between 1987 and 1990 at Punta Candelero, Humacao as part of an archaeological mitigation project co-sponsored by Palmas del Mar Co. and the University of Turabo Museum.
- 3— The surveys offer general information about sites within a large area, their visible characteristics, major cultural components, geographic distribution and their relationship with environmental elements such as rivers and mangroves, for example. In Puerto Rico, three island-wide surveys have been implemented. The first was carried out by Samuel Lothrop, the second by Rouse during his investigations in the 1930's, and the third was sponsored by the Institute of Puerto Rican Culture between 1979 and 1980, coordinated by archaeologist Juan González. My archaeological knowledge of the eastern half of Puerto Rico was reinforced during 1979 and 1980, since my participation in this survey included filling inventory forms of new sites and confirming known sites in the northeast, east and east-central regions of Puerto Rico.
- 4— The recently introduced sub-series concept was originally proposed by Vescelius. It allows, in my judgement, the placement of what previously was limited to the rise, development and

transformation of the ceramic styles in a more ample cultural context. But this new category adjoins and doesn't fundamentally alter the previous stylistic definitions and ceramic series. In light of these new elements, Rouse has regrouped the ceramic styles and series in two large categories, the Saladoid and the Ostionoid component, but we are interested only in the second one at the moment. For Puerto Rico the Ostionoid component includes the Ostionan Ostionoid, Elenan Ostionoid, and Chican Ostionoid Sub-series, within which are placed the old styles and series applicable to the island and mentioned previously.

To continue clarifying the terms utilized in the presentation, some of which are dealt with in Puerto Rican archaeological literature, since the inception of the model Rouse (1952) included all these ceramic styles within the ample concept of the Taínan Culture, which initially encompassed everything post-Saladoid, and is equatable with Rainey's Shell Culture (1940). Later, and in the wake of other authors such as Alegría, Periods IIIA and B, including both the Pure and Modified Ostiones and the Elenoid Monserrate and Santa Elena styles, have been defined as part of an ample classification known as Pre-Taínan. Finally, Period IV, specially the phase prior to the arrival of the Europeans (Period IVA), with its Capá ceramic style in the west, Esperanza in the east and Boca Chica at some places in the south and east, is associated with Taínan Culture proper.

Some authors apply the series or ceramic complex names indiscriminately to the specific culture associated with them, such as the Ostionoid Culture and the Elenoid Culture. The name Ostionoid Culture is applied to the Elenoid Culture because the former was the first to be identified and studied, at least in Puerto Rico. However, no author would refer to the Capá, Esperanza or Boca Chica cultures in Puerto Rico. The terms Pre-Taínan and Taínan Culture are by far the preferential ones used by Puerto Rican archaeologists.

- 5 - Monserrate-style ceramics are not well known in Puerto Rico, nor have they been properly studied. It is limited mainly to some large sites such as its type site Monserrate, and Vacía Talega (L-14). It is in these sites that its diversity and complexity can be appreciated. Recently, Oliver wrote a detailed analysis of the Monserrate and Santa Elena style ceramics found at site L-23 by Grossman & Assoc. Oliver divides the Santa Elena ceramics into three separate components: Early Santa Elena, which corresponds to what we call Monserrate style, and which he considers as prior to the 650 AD dates; the Middle Santa Elena, between 650 and 900 AD; and finally Late Santa Elena, possibly between 900 and 1200 AD, with certain relationship to Capá and Mellacoid ceramics.

One interesting aspect is that, amongst the hundreds of known sites in the east, there has not been one exclusively identified with Monserrate ceramics. In most cases the Monserrate component is present in the deepest and earliest part of the Santa Elena stylistic component proper, for which reason its demographic and habitational context falls within the Elenoid Series, whereas its stylistic elements are more closely related to the Saladoid Series. Another point I would like to emphasize is that, in almost all sites where ballcourts would later appear within the study area, the earliest ceramic component is precisely the Monserrate, which should be taken into account in future investigations.

- 6 - For the study of many aspects of Taínan Culture and society we rely on the excellent descriptions by chroniclers and travellers which wrote extensively on the subject. Ethnohistoric research is probably the richest source of information concerning the complex and dynamic Taínan society. In these writings both historians and archaeologists find data which allows for their interpretation of the social structure, the political institution of chiefdoms, religion, art and the symbolic world of this society.

But the use of historic sources has serious limitations and difficulties, including for those of us who read the documents in their original Spanish and belong to a culture deeply rooted in Hispanic traditions. Archaeology can be an additional analytical instrument, specially for the study of the origins of the true, properly Taínan development, which began between the tenth and twelfth centuries in our region. In Puerto Rico, the archaeology of the Taínans has suffered from poor investigative focus, besides being relatively recent. As in previous periods, we will use the Loíza River Basin Survey as a base, and I will complement this with other regional surveys, and excavations at specific sites.

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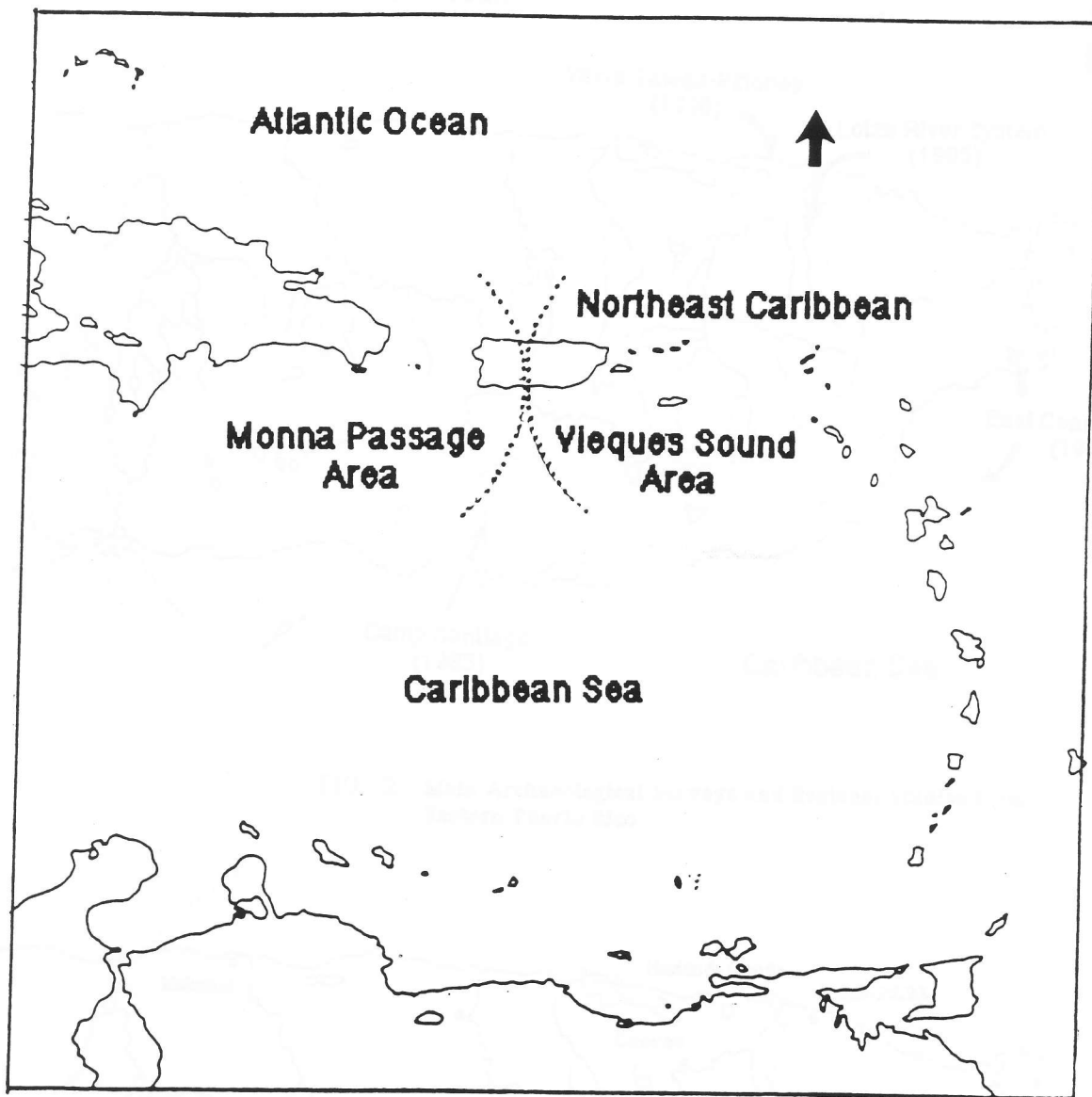


FIG. 1 - Puerto Rico and the Northeast Caribbean Region.

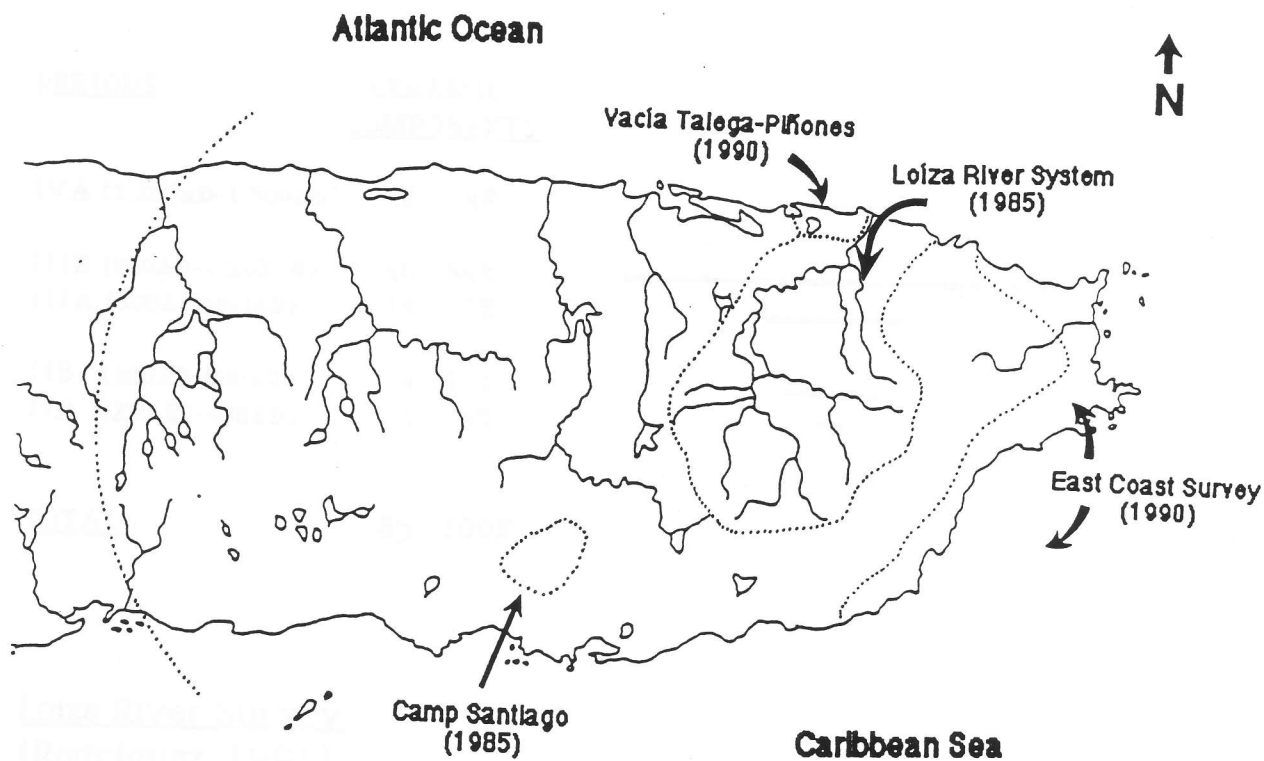


FIG. 2 - Main Archaeological Surveys and Regional Studies from Eastern Puerto Rico.

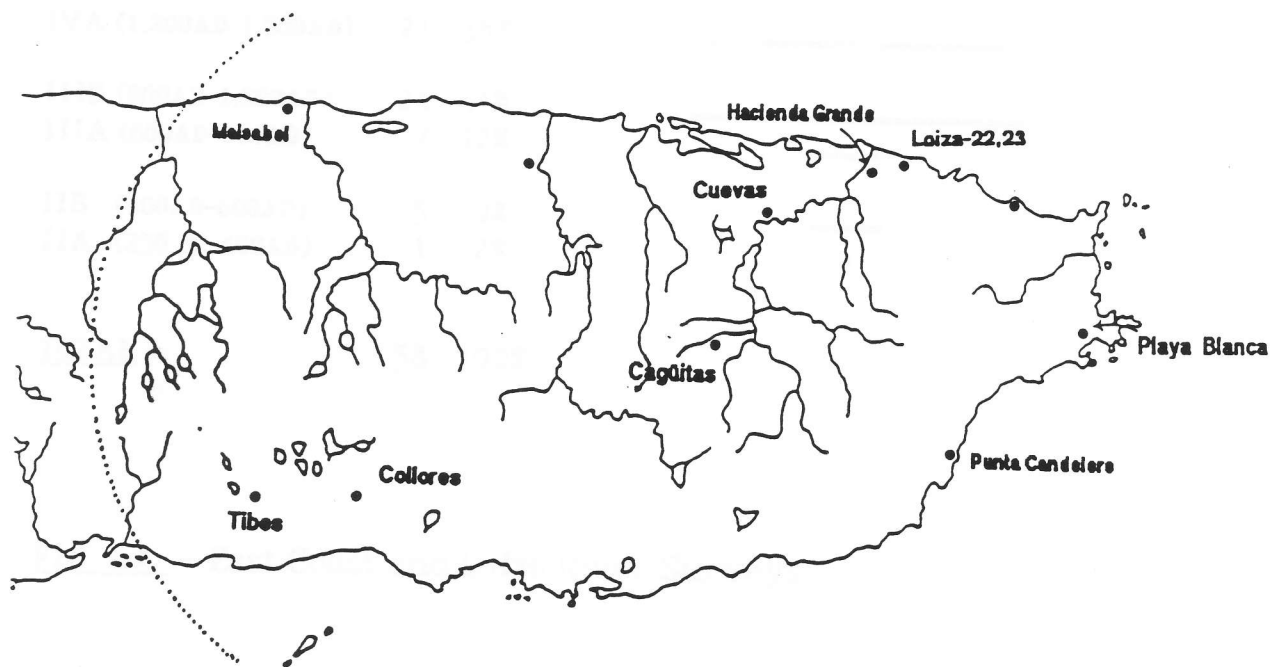
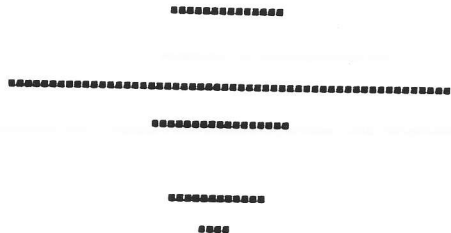


FIG. 3 - Selected Sites in Eastern Puerto Rico.

East Coast Survey
(Rodríguez, 1990)

<u>PERIODS</u>	<u>CERAMIC COMPONENTS</u>	
IVA (1,200AD-1,500AD)	12	14%
IIIB (900AD-1,200AD)	46	54%
IIIA (600AD-900AD)	14	17%
IIB (400AD-600AD)	9	11%
IIA (250 BC-400AD)	3	4%
<u>TOTAL</u>	85	100%



Loiza River Survey
(Rodríguez, 1991)

<u>PERIODS</u>	<u>CERAMIC COMPONENTS</u>	
IVA (1,200AD-1,500AD)	21	36%
IIIB (900AD-1,200AD)	24	41%
IIIA (600AD-900AD)	7	12%
IIB (400AD-600AD)	5	9%
IIA (250 BC-400AD)	1	2%
<u>TOTAL</u>	58	100%

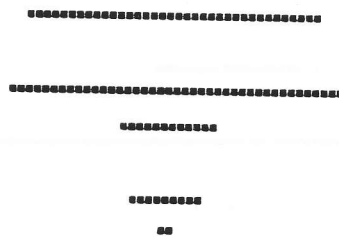


FIG. 4A - East Coast and Loiza River Surveys.

Camp Santiago Survey
(Rodríguez, 1985)

<u>PERIODS</u>	<u>CERAMIC COMPONENTS</u>	
IVA (1,200-1,500AD)	7	28%
IIIAB (600-1,200AD)	18	72%
IIAB (250BC-600AD)	0	0
<u>TOTAL</u>	25	100%

Vacía Talega/Piñones Survey
(Vélez, 1990)

<u>PERIODS</u>	<u>CERAMIC COMPONENTS</u>	
IV A (1,200-1,500AD)	8	20%
III AB (600-1,200AD)	32	78%
II AB (250BC-600AD)	1	2%
<u>TOTAL</u>	41	100%

FIG. 4B - Camp Santiago and Vacía Talega/Piñones Surveys.

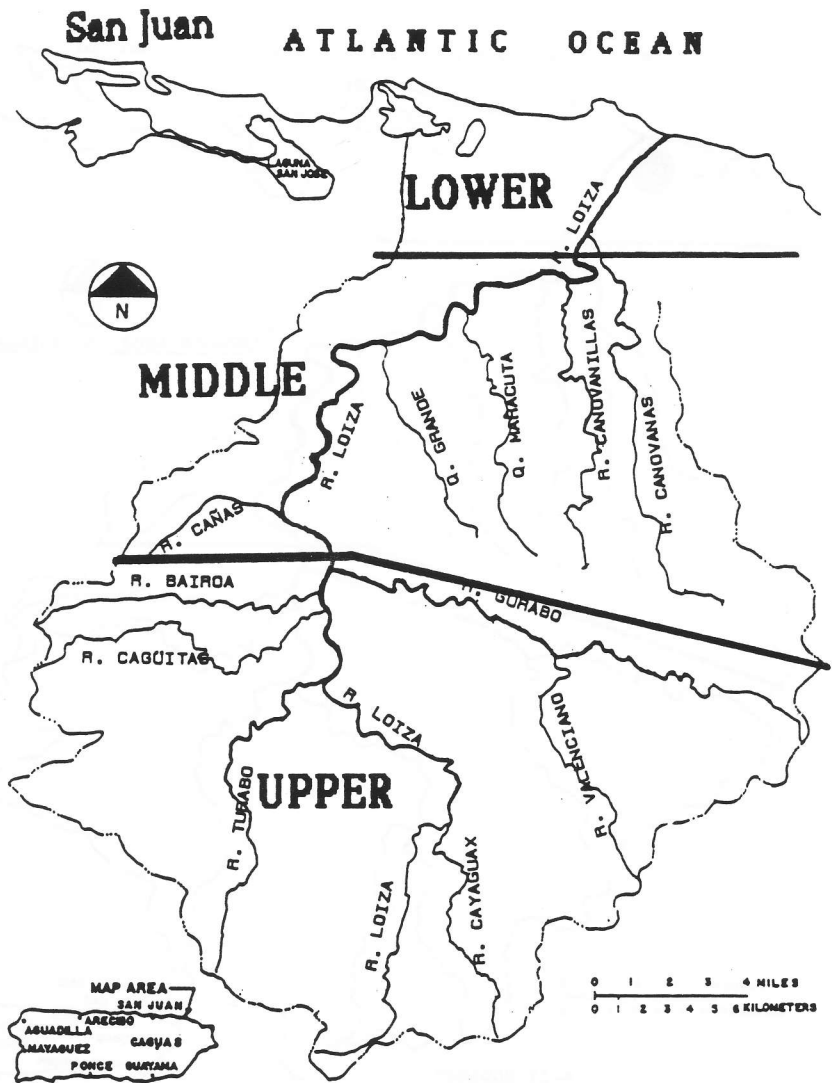


FIG. 5A

RIO GRANDE DE LOIZA BASIN

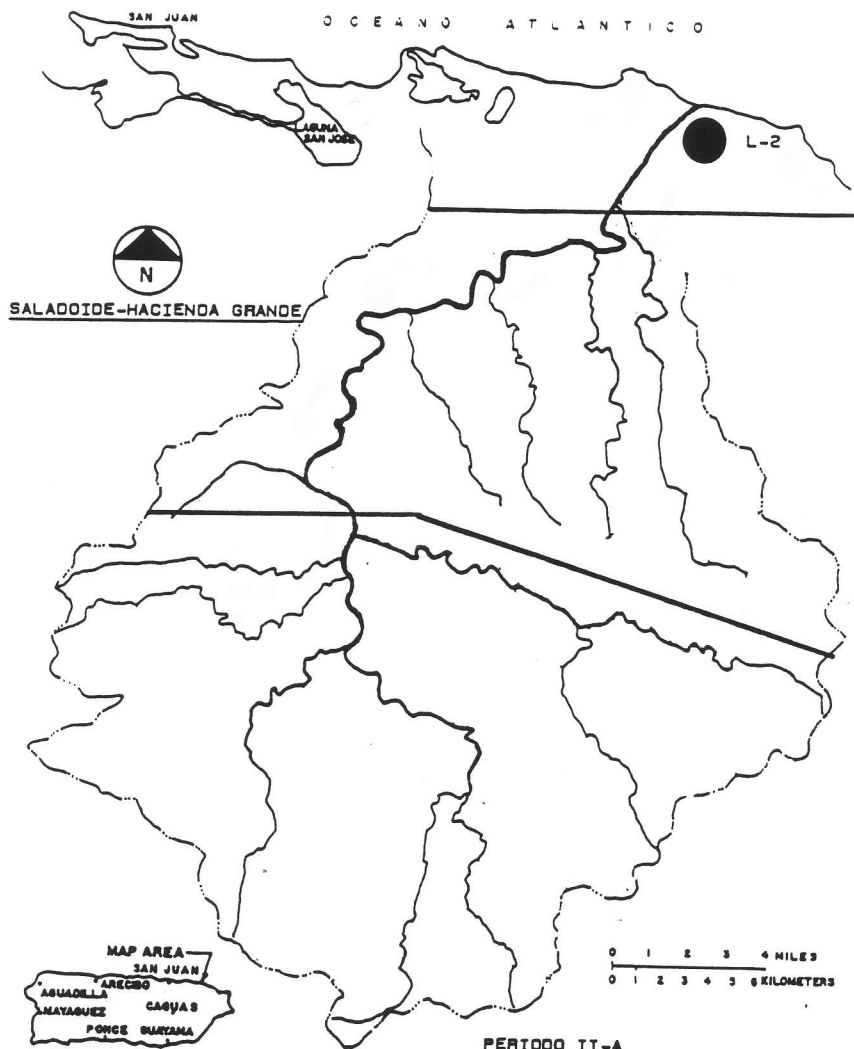


FIG. 5B

**PERIODO II-A
(250BC-400AD)
RIO GRANDE DE LOIZA BASIN
CEDROSAN SALADOID SUBSERIES
(HACIENDA GRANDE STYLE)**

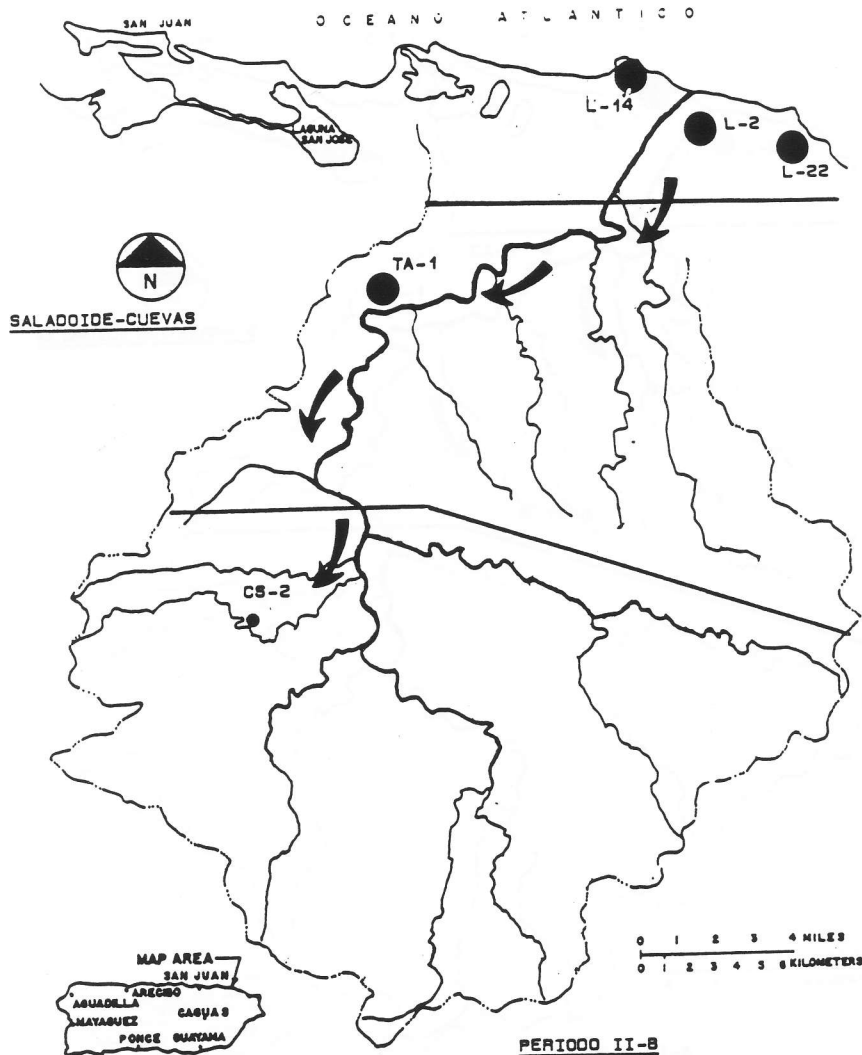


FIG. 5C

PERIODO II-B
 (400 AD - 600 AD)
 RIO GRANDE DE LOIZA BASIN
CEDROSAN SALADOID SUBSERIES
(CUEVAS STYLE)

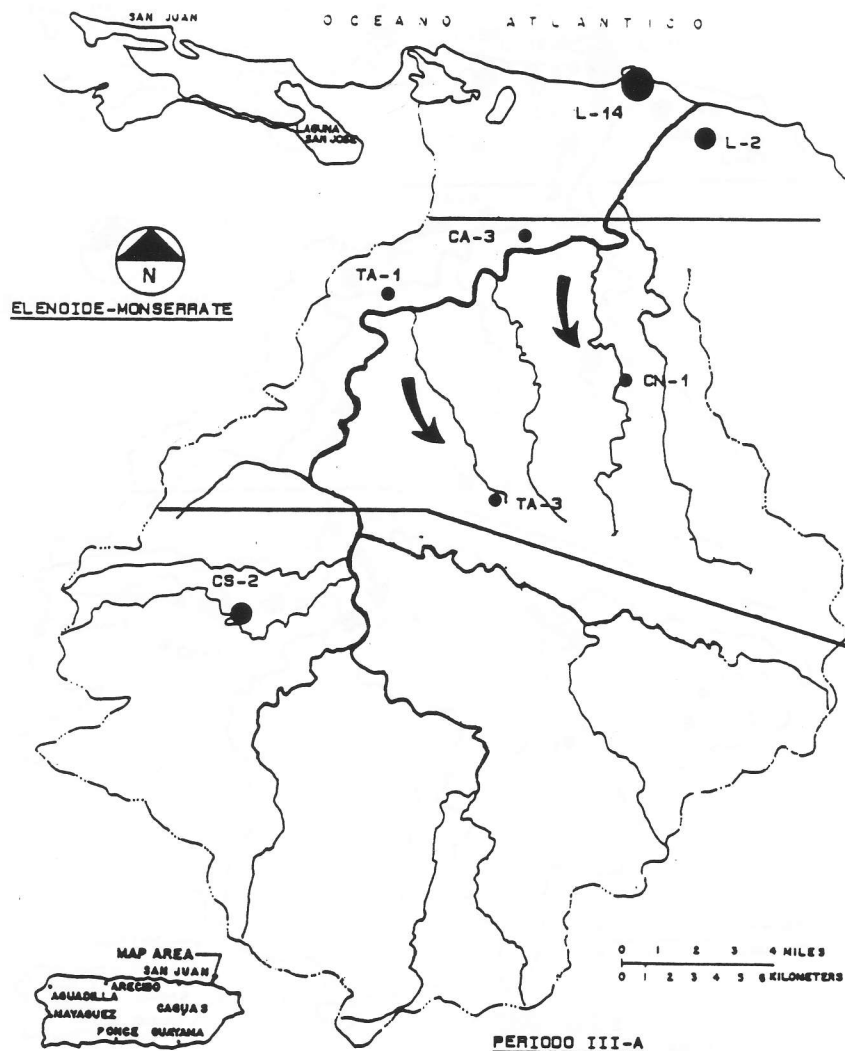


FIG. 5D

PERIODO III-A
 (600 AD - 900 AD)

RIO GRANDE DE LOIZA BASIN

ELENAN OSTIONOID SUBSERIES
(MONSERRATE STYLE)

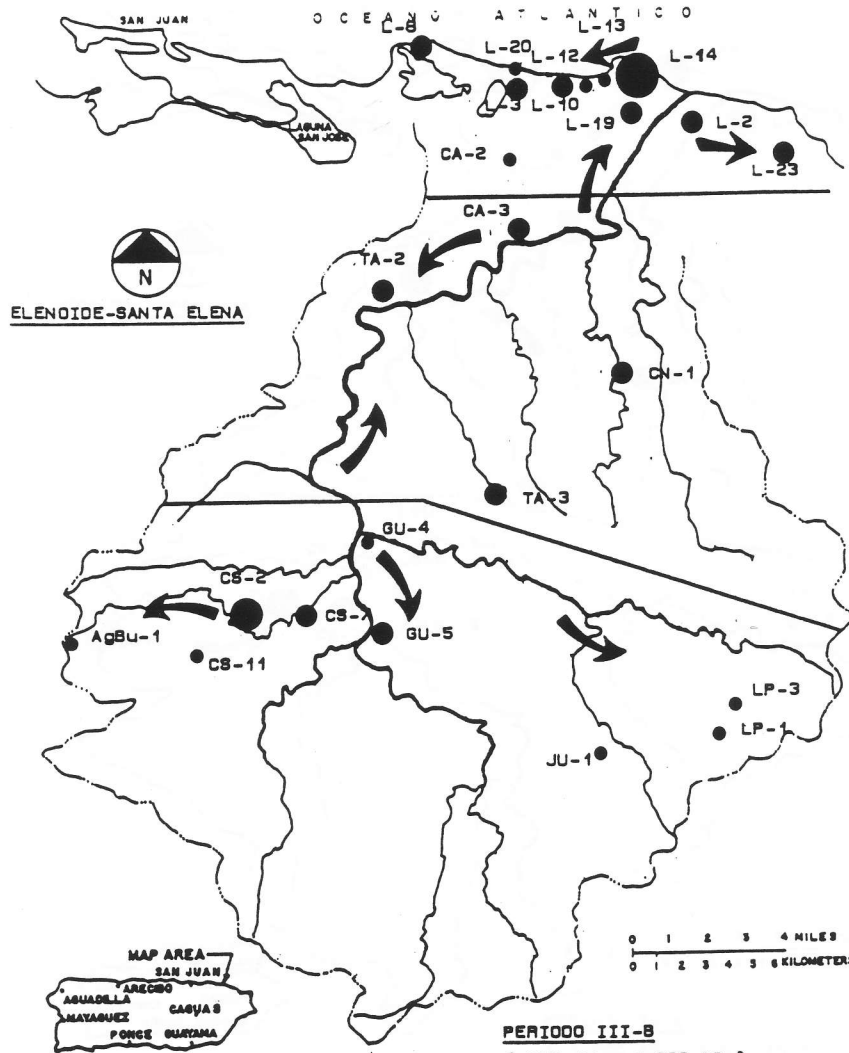
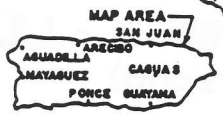
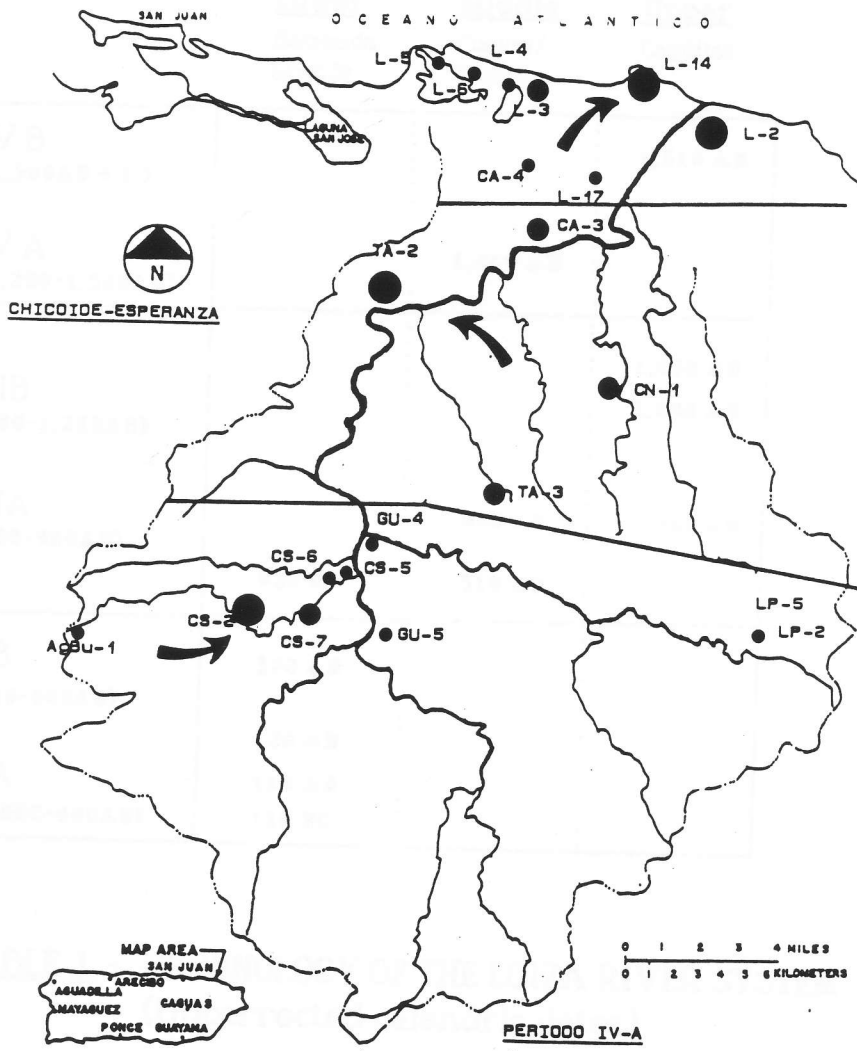


FIG. 5E

PERIODO III-B
 (900 AD - 1,200 AD)
 RIO GRANDE DE LOIZA BASIN
ELENAN OSTIONOID SUBSERIES
(SANTA ELENA STYLE)



PERIODO IV-A
 (1,200 AD - 1,500 AD)

FIG. 5F

**RIO GRANDE DE LOIZA BASIN
 CHICAN OSTIONOID SUBSERIES
 (ESPERANZA STYLE)**

PERIODS

SITES IN THE LOIZA RIVER SYSTEM

	<u>Lower</u> Hacienda Grande	<u>Middle</u> Cuevas/ Bateyes	<u>Upper</u> Cagüites
IV B (1,500AD + ?)			1,610 AD
IV A (1,200-1,500AD)		1,440 AD	
IIIB (900-1,200AD)			1,090 AD 1,080 AD
IIIA (600-900AD)	630 AD	800 AD 510 AD	960 AD
IIB (400-600AD)	370 AD		
IIA (250BC-400AD)	120 AD 110 AD 110 BC		

TABLE 1 - CHRONOLOGY OF THE LOIZA RIVER SYSTEM
(Uncorrected calendric dates)

CERAMIC SUBSERIES CERAMIC STYLES	Cedrosan/ Huecan Saladoid		Elenan Ostionoid		Chican Ostionoid	
	La Hueca/ Hda. Gde Cuevas		Monse- rrate	Santa Elena	Hist. Esperanza Contact	
PERIODS (dates)	<u>IIA</u> (250BC- 400AD)	<u>IIB</u> (400- 600AD)	<u>IIIA</u> (600- 900AD)	<u>IIIB</u> (900- 1200AD)	<u>IVA</u> (1200- 1500AD)	<u>IVB</u> (1,500- ?????)
SITES						
Playa Blanca 5				760	1500 1360 1150	
Cuevas/Bateyes		510	800		1440	
Cagüitas			960	1090 1080		1610
L-22/23			425	725		
Collores			885 ^a 825 ^a 745 ^a			
La Plena				915 850		
Tibes				1290 765 740		
Santa Elena				1210 890		
Monserrate			710			
Maisabel	430 290 140 10BC 110BC					
El Convento	85 45BC 160BC					
Hacienda Grande	120 110 110BC	630 370				
Punta Candelero	70BC 170BC					

TABLE 2 - Radiocarbon Dates for Eastern Puerto Rico.

(Most of them are uncorrected calendric dates; all are AD dates except when BC is indicated)

^a Associated pottery in Collores was Early Ostiones, not Monserrate Style.



FIG. 6 - "HUECAN SALADOID, LA HUECA STYLE" POTTERY FROM PUNTA CANDELERO SITE; HUMACAO, PUERTO RICO.



FIG. 7 - "CEDROSAN SALADOID, HACIENDA GRANDE STYLE" POTTERY FROM HACIENDA GRANDE SITE; LOIZA, PUERTO RICO.



FIG. 8 - "CEDROSAN SALADOID, CUEVAS STYLE" POTTERY FROM LAS CARRERAS SITE; LOIZA, PUERTO RICO.

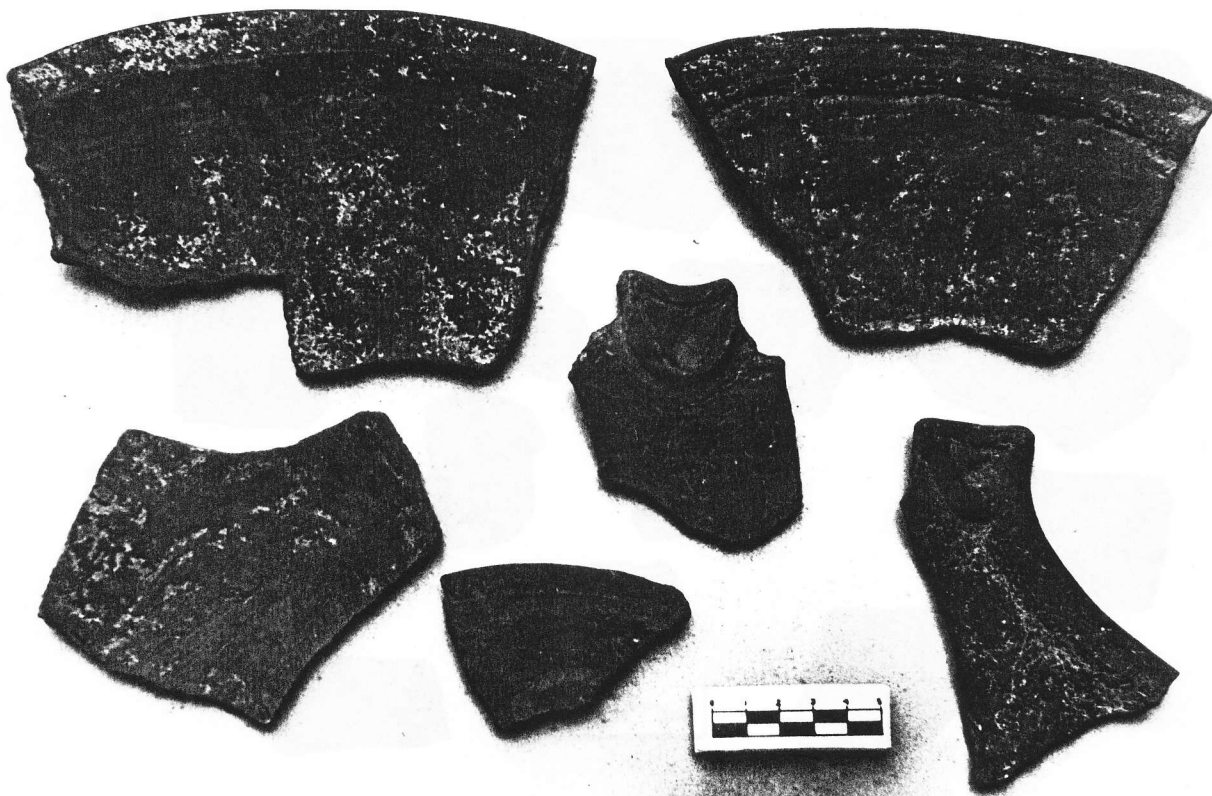


FIG. 9 - "ELENAN OSTIONOID, MONSERRATE STYLE" POTTERY FROM VACIA TALEGA SITE; LOIZA, PUERTO RICO.

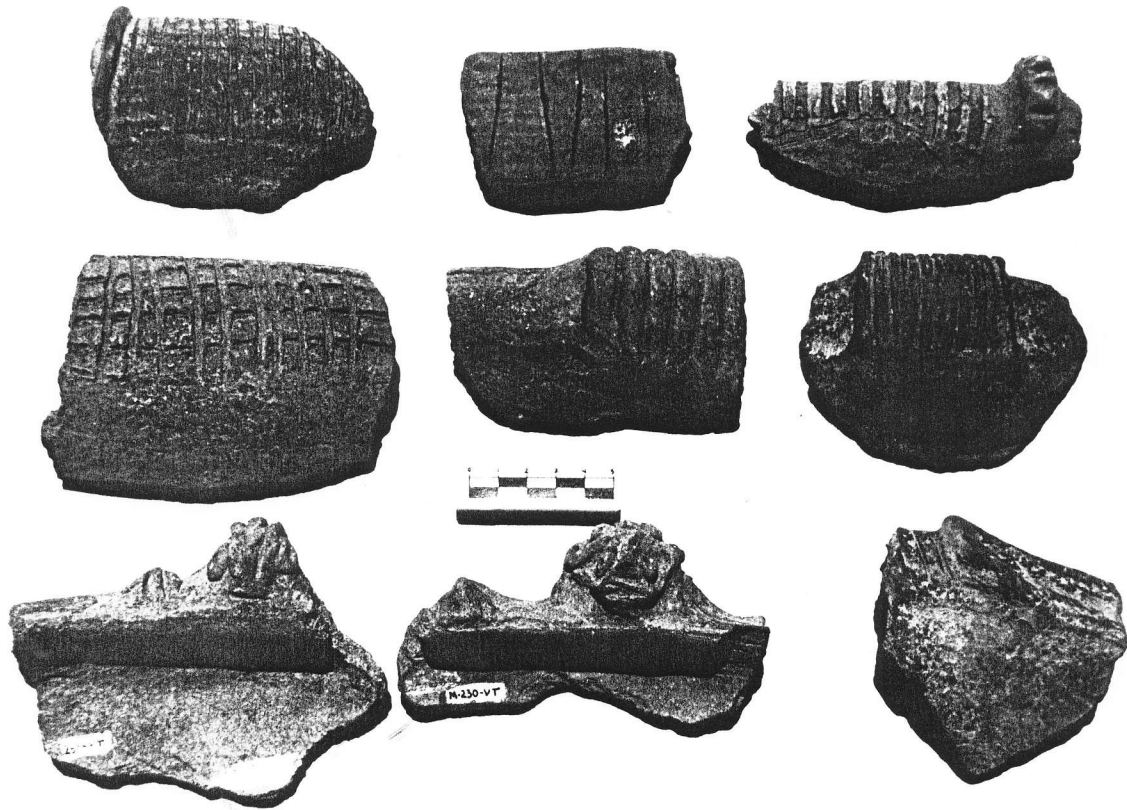


FIG. 10- 'ELENAN OSTIONOID, SANTA ELENA STYLE' POTTERY FROM VACIA TALEGA SITE; LOIZA, PUERTO RICO.



FIG. 11 - 'CHICAN OSTIONOID, ESPERANZA STYLE' POTTERY FROM LOS BATEYES SITE, TRUJILLO ALTO, PUERTO RICO.