

AD 1500 1400 1300 1200 1100 1000 900 800 700 600 500 400 300 200 100 0	Southern Costa Rica		Western Panama		Gulf of Chiriquí
	General Valley	Terraba Coto-Birds	Chiriquí Highlands	Chiriquí Plains	
1400	Chiriquí	Chiriquí	Chiriquí	Chiriquí	Chiriquí
1300	?	?	?	?	?
1200	?	?	?	?	?
1100	Chiriquí	Chiriquí	Chiriquí	Chiriquí	Chiriquí
1000	?	?	?	?	?
900	?	?	?	?	San Lorenzo
800	?	?	?	?	?
700	?	?	?	?	?
600	?	?	?	?	?
500	?	?	?	?	Burica
400	Agua Buenas	Agua Buenas	Late Bugaba	Late Bugaba	?
300	?	?	Early Bugaba	?	?
200	?	?	?	Concepción	?
100	?	?	?	?	?
0	?	?	?	?	?
100	?	?	?	?	?
200	Quebradas	?	?	?	?
300	?	?	?	?	?
400	?	?	?	?	?
500	?	?	?	?	?
600	?	?	?	?	?
700	?	?	?	?	?
800	?	?	?	?	?
900	?	?	?	?	?
1000	?	Curré	?	?	?
1100	?	?	?	?	?
1200	?	?	?	?	?
1300	?	?	?	?	?
1500	?	?	Bogquete (Preceramic)	?	?
1600	?	?	?	?	?
1700	?	?	?	?	?
1800	?	?	?	?	?
1900	?	?	?	?	?
2000 BC	?	?	?	?	?

Figure 4.7 Chronological sequences of Greater Chiriquí.

However, it is probable that during those times, the movement of the river and tributary streams caused some seasonal adjustments.

Note

- The calibration method employed for the radiocarbon dates is Pazdur and Michczyńska's.

5.

The Archaeology of the Central Pacific Coast of Costa Rica

FRANCISCO CORRALES ULLOA and
FIGENIA QUINTANILLA JIMÉNEZ

Archaeology has developed as a scientific discipline in Costa Rica only recently (Corrales 1987a). In the last thirty years, an increasing amount of research has been focused on the definition of chronological sequences, settlement patterns, and sociocultural development of regional populations (Aguilar 1972, 1976; Bauder 1967; Coe and Bauder 1961; Haberland 1976c; W. J. Kennedy 1968; Lange 1971b; Lange and Abel-Vidor 1980; Sheets, ed. 1984; Snarskis 1978). However, because it is such a recent development, there is only fragmentary knowledge of the spatial and time distribution of precolumbian settlements within the country. There continues to be a lack of studies in certain regions.

A few years ago the Central Pacific zone of Costa Rica was archaeologically unknown, and it was not until 1986 that systematic studies developed a cultural characterization of the precolumbian groups inhabiting the area. During this time, the Central Pacific Archaeological Project was developed by the National Museum of Costa Rica, with the support of the European Economic Community through the project CEENA 82\12 (Reordenamiento Agrari Desarollo Rural Integrado).

The Central Pacific Archaeological Project (1986–1990) had three goals: (1) to establish the chronological parameters for the characterization of spatial and time distribution of precolumbian settlements along the Central Pacific zone; (2) to evaluate the zone and its association with the Greater Nicoya and the Greater Chiriquí regions and between these two "greater" regions and the Central Valley; and (3) to analyze the subsistence patterns of the region, including both agricultural activities and the exploitation of marine resources, and to study the development of exchange mechanisms between the coast and inland settlements (Corrales and Quintanilla 1986).

To fulfill these goals, exploratory and systematic surveys were carried out, followed by the evaluation and excavations of selected archaeological sites. Fieldwork was concentrated on the lower basin of the Río Tárcoles, the coastal plains of Salinas and the Tivives mangrove, the middle basin of the Río Jesús María, the coastal valley of Jacó, and the piedmont zone of the Río Parrita Valley. The main purpose of this chapter is to integrate the Central

Pacific zone with the archaeological data of the Central zone by providing a general view of the precolumbian occupation in the Central Pacific region and by evaluating the role of the Central Pacific region within the regional exchange.

ASSOCIATION WITH THE ARCHAEOLOGICAL CENTRAL REGION

The delimitation of archaeological regions and subregions in Costa Rica has proceeded gradually. However, such regional delimitations often have been ambiguous because neither geographical nor cultural limits seem to be clear. For example, we now know that natural limits such as the mountain range across the country did not constitute a boundary for the expansion of closely related cultural groups.

Three main archaeological regions have been defined within the country based on geographical and cultural characteristics: (1) Greater Nicoya, (2) the Central Region, and (3) Greater Chiriquí (Figure 5.1; cf. Stone 1966a). As used here, the term *archaeological region* is analogous to the term *archaeological subarea*, and *subregion* is equivalent to the term *sector*.

The Greater Nicoya region includes part of Nicaragua, defined by two sectors or subregions: the northern sector (the isthmus of Rivas, Nicaragua) and the southern sector (the province of Guanacaste, Costa Rica). The northern sector of the region has been extended toward the Gulf of Fonseca, Honduras (Lange, Bishop, and Lange 1990:7). The southern boundary of the region is located near the Central Pacific, around the current settlement of Chomes. The eastern limit with the Central Valley is defined by the Guanacaste and Tilarán mountain ranges (Figure 5.1).

The Greater Chiriquí archaeological region is located toward the southeastern border of Costa Rica and is subdivided into two areas: the subregion of Diquís, located in Costa Rican territory, and the subregion of West Panamá (Chiriquí and Bocas del Toro Provinces). The subarea located between the two former subregions has been ambiguously defined. This subarea encompasses the Central Pacific, the Central Valley, the northern plains, and the Central Atlantic watershed (Figure 5.1). Several studies have emphasized the great similarity of cultural characteristics shared by the precolumbian groups inhabiting the Central Valley and the Atlantic watershed (Stone 1966a; Aguilar 1976; Arias 1984).

Unfortunately, such correlations could not be demonstrated for the Central Pacific zone. Because of the previously limited efforts in archaeological research in the area, no regional limits or internal boundaries could be defined. Thus, one of the main purposes of this research was to evaluate the degree of cultural integration developed between the Central Pacific and the contiguous archaeological zones, motivated by the intermediate geographical location of the area between the Northern Pacific, the Central Valley, and the Southern Pacific.

DATA COLLECTION AND ANALYSIS

Ceramic materials, settlement patterns, and architectural characteristics were comparatively analyzed, and a high cultural correlation was established between the Central Pacific, the Central Valley, and the Atlantic watershed plains (Corrales and Quintanilla 1986), beginning as early as 300 B.C. The formal similarities in the ceramics and the types of sites suggest the precolumbian societies of these zones maintained close ties, inasmuch as they shared the same formal symbolic codes.

This inference permits the definition of the Central Pacific and the Central Valley as the Central-Pacific Archaeological Subregion and also as part of the Central Archaeological Region. The Atlantic subregion is delimited by

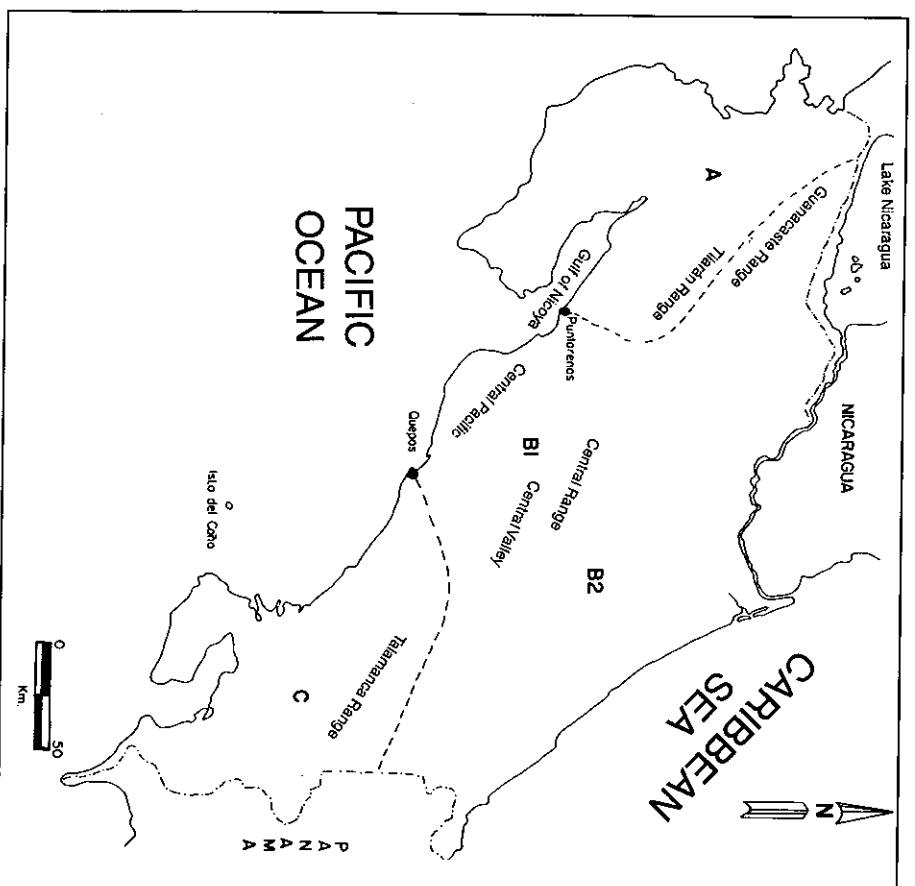


Figure 5.1 Archaeological regions of Costa Rica.

the Turrialba Valley and the Atlantic plains. The northern plains and eastern Atlantic subregions are not yet well defined.

Although cultural boundaries for the Central Pacific zone are considered temporary, a recent survey carried out by Corrales has established the southern boundary of the Central Pacific with Greater Chiriquí between the Parrita and Naranjo Rivers, near the city of Quepos. The survey on the northern part reached only to the area near the Alto de las Mesas, located between the Jesus Maria and Barranca Rivers; however, the northern boundary with the Greater Nicoya has been defined near the city of Puntarenas or farther.

Another issue that remains open to discussion is the definition of specific geographical limits for each of the chronological occupations. It is necessary to clarify that the established archaeological regions and subregions constitute a general framework; however, delineating the extensive characteristics of each particular cultural phase remains an unresolved issue that needs further research.

PRECOLUMBIAN OCCUPATION OF THE CENTRAL PACIFIC

Within the Central Archaeological Region, the earliest chronological occupation found dates to approximately 10,000 B.C., with the arrival of preceramic hunter-gatherer groups (Snarskis 1978; Acuña 1983; Castillo et al. 1987). The establishment of ceramic-agricultural societies occurred by 1500 B.C. However, within the Central Pacific zone, early occupations have been identified as far back as 300 B.C., and between 500 B.C. and A.D. 300, there is evidence of agricultural activities and sociopolitical complexity characterized by a transitional stage between tribal and chiefdom social organization (Snarskis 1981a; Fonseca 1992). Evidence of the earliest precolumbian occupations in the area is expected to be documented through further research. Most of the information on the earlier occupations comes from surveys: those sites that have been excavated have provided information only for later occupations. Given the cultural similarities observed between the Central Pacific and the Central Valley, a decision was made to use the same chronological sequence defined for the Central Valley and developed by Hartman (1901), Aguilar (1976), and Arias and Chávez (1985).

In the process of defining the Central Pacific cultural chronological phases, ceramics played an important role, although the association of other elements such as lithics, settlement patterns, and architectural remains also shows a temporal and spatial affinity. However, it should be kept in mind that different elements may have differently changing patterns. It is also clear that formal changes do not necessarily respond to organizational transformations of the society.

The following phases were defined: Pavas phase (300 B.C.–A.D. 300), Curridabat phase (A.D. 300–900), and Carrago phase (A.D. 900–1500). Within this chronological sequence (Figure 5.2), comparison suggests that the exchange network developed with the Greater Nicoya Archaeological Subarea (Guanacaste) between A.D. 500 and 1350 (Bagaces/Sapoá periods).

	CENTRAL REGION			GREATER NICOYA REGION
	CENTRAL PACIFIC SUBREGION	CENTRAL VALLEY	ATLANTIC SUBREGION	
1500AD	CENTRAL PACIFIC		CENTRAL ATLANTIC	OMEITEPE PERIOD
1300	CARRAGO PHASE	CARRAGO PHASE	LA CABARA PHASE	SAPOA PERIOD
1000				
800				
500	CURRIDABAT PHASE	CURRIDABAT PHASE	LA SELVA PHASE	BAGACES PERIOD
300				
300	PAVAS PHASE	PAVAS PHASE	EL BOSQUE PHASE	TEMPISQUE PERIOD
500				
1000	?	BARVA PHASE	LA MONTAÑA PHASE	OROSI PERIOD LA POCHOYA COMPLEX
1500				
2000				
10000BC	?	?	GUARDARIA FLORENCIA	?

Figure 5.2 Comparative chronological sequences, Central Pacific and Greater Nicoya.

A total of sixty-six archaeological sites were recorded (Table 5.1), from which thirty-seven had single components, thirteen had two components, and five were multicomponent (Figure 5.3). Thirty-three sites dated to the Pavas phase, sixteen sites were occupied during the Curridabat phase, and twenty-nine were from the Carrago phase. Chronological association was not defined for eleven of the sites. Ceramics were the main criteria for the chronological definition of the sites, along with location and architectural characteristics. A general view of the development of precolumbian populations in the Central Pacific follows.

TABLE 5.1 Central Pacific archaeological sites

Site	Type	Phase	Date	Altitude Above Sea Level	Size M2
<u>Jesús María-Oritcajo</u>					
A-320-El Plan	H	P/C	MS	250	50,000
A-321-Jesús-María	H	P/Cv/C	B	200	50,000
A-363-Chumical	H	—	P	290	—
A-4-Labrador	H	P/Cv/C	MS	200	5,000
A-11-Pinal	H	P/Cv/C	MS	240	60,000
A-361-Altaro	H/F	Cv/C	M/T	260	200,000
A-12-Higueron	H	P/Cv/C	MS	260	20,000
A-18-El Maizal	H	—	MS	200	2,500
A-13-Coyal	H	—	MS	200	2,500
A-8-Alpizar	H	P	MS	140	5,000
A-15-La Palmera	H	P	MS	140	20,000
A-17-Canal	H	P	MS	180	5,000
A-14-Pozo Azul	H	Cv/C	MS	200	2,500
A-16-Oritcajo	H	P	MS	140	5,000
<u>Salinas-Tivives</u>					
P-147-Alto Las Mesas	H	P	MS	110	5,000
P-148-Alto Las Mesas 2	H	P	MS	190	5,000
P-149-Vista del Mar	H	P	MS	120	20,000
P-150-Crotalo	H	P	MS	10	7,500
P-151-Garrobo	H	Cv/C	MS	10	2,500
P-152-Crotalo 2	H	—	MS	10	20,000
A-338-La Malla	H	Cr	M	10	1,500
A-339-El Amargado	H	—	M	10	25
A-340-Laguna Grande	H	Cv/C	M	10	300
P-359-Brazo Seco	H	Cr	M	5	5,000
P-360-Targua	H	Cr	F/MS	10	1,000
A-336-Finca Leticia	H	C	MS	85	5,000
A-337-El Puente	H	P/C	MS	110	10,000
A-342-Kilometro 81	H/F	C	MS	90	5,000
<u>Capulin-Carara</u>					
A-361-Lomas Capulin	F	—	EP	100	1,000
A-362-La Trepada	H/F	P/C	M	150	600
A-363-Alto Capulin	H/F	P/C	MS/M	150	2,000
A-364-Capulin 31	H	P	MS	150	2,500
A-365-Capulin 21	H	P	MS	160	2,500
A-366-Capulin 28	H	P	MS	160	2,500
A-367-Platanillal	F	—	T	140	10
A-373-Capulin 37	H	P	MS	150	2,500
A-330-La Flor	H	C	MS	160	200
A-331-Las Gordas	H	P	MS	150	2,500
A-371-La Bravura	H	P	MS	150	2,500
A-333-La Montura	H	P	MS	150	2,500

Table 5.1 continued on next page

TABLE 5.1 continued

Site	Type	Phase	Date	Altitude Above Sea Level	Size M2
<u>Capulin-Carara</u>					
A-370-La Laguna	F	—	EP	150	1,000
A-374-Lagunilla	H	—	MS	160	1,500
SJ-343-Lomas Entierros	H/F	C	M/T/EP	180	50,000
SJ-344-Carara	H	Cv/C	B	30	50
SJ-345-Tárcoles 1	H	Cv/C	MS	30	400
SJ-346-Tárcoles 2	H/F	P/C	M	30	6,400
SJ-347-Tárcoles 3	F	Cv/C	M	30	300
P-348-Zompopa	H/F	P/C	MS/T	30	800
P-349-Chocutaco	H/F	C	MS/T	50	20
P-350-Pizote 1	H	P	MS	240	250
P-351-Pizote 2	H	P	MS	340	6,000
SJ-352-Indio	F	C	EP	50	250
P-353-Sapos	H	C	MS	40	150
P-354-Guacamaya	H	C	MS	30	2,000
SJ-355-Bijagual 1	F	—	M	450	2,000
SJ-357-Bijagual 2	H	—	MS	470	200
SJ-356-Bajo Laguna	H	P	MS	50	20
SJ-240-Turribares	H	C	M/EP	160	20,000
<u>Gamatillo</u>					
SJ-358-Gamatillo	H	P	MS	50	—
<u>Valle Rio Parrita</u>					
SJ-20-Bijagual	H/F	C	M/T	90	50,000
SJ-22-Pozo Azul	H/F	C	M/T/EP	90	50,000
P-2-Sardinal	H/F	C	M/T/MS	50	30,000
<u>Valle de Jaco</u>					
P-161-Quebradas Seca	H	P	MS/F	30	3,000
P-162-Madrigal	H	P	MS	40	1,000
P-163-Fragata	H	P	MS	20	2,000
<u>MS = Surface material</u>					
<u>B = Foundation</u>					
<u>P = Petroglyph</u>					
<u>M = Mound</u>					
<u>T = Tombs</u>					
<u>F = Hearth</u>					
<u>EP = Stone structure</u>					
<u>P = Pavas phase</u>					
<u>Cr = Curridabat phase</u>					
<u>C = Cartago phase</u>					
<u>H = Habitation</u>					
<u>F = Cemetery</u>					

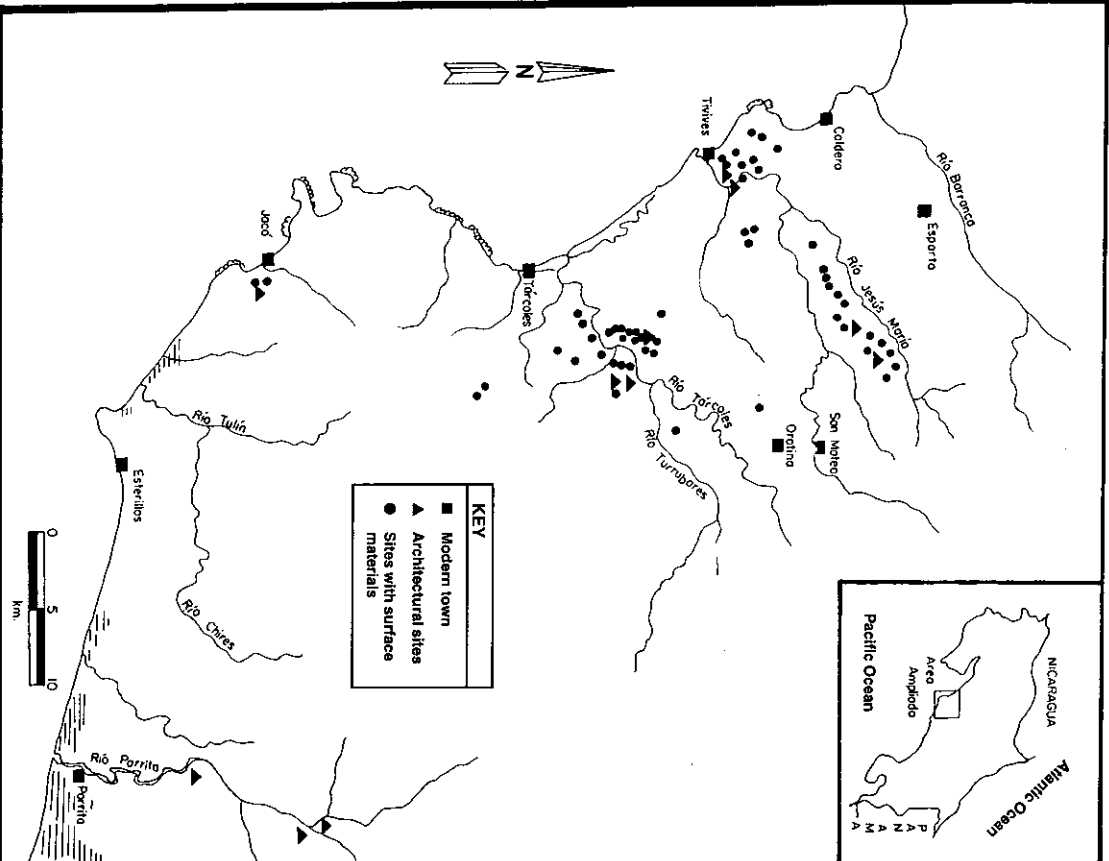


Figure 5.3 Central Pacific region of Costa Rica: general distribution of archaeological sites.

Pavvas Phase (300 B.C.–A.D. 300)

Within the general development of the Central Archaeological Region, changes in the social characteristics of the population are observed starting 300 B.C. Although an egalitarian type of organization still characterized

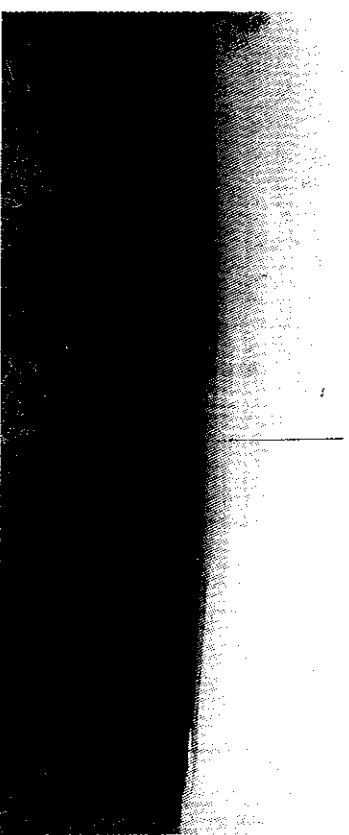


Figure 5.4 View of the Central Pacific from Las Mesas toward the Tivives mangrove.

the social system, some changes are observed in which the political power and the control of distribution networks rely on the authority of the “chief.” Such assumptions are indicated by the presence of stratified sites and differential status, showing increasing social complexity (Snarskis 1981a; Fonseca 1992). The thirty-three archaeological sites recognized within the Pavvas phase were located on the coastal valley of Jacó, Capulín-Carara, the valley of the Río Tárcoles, and the Jesús María hills (Figure 5.4). Most of the sites provide concentrations of material evidence at the surface level, with an extension of no more than 1 ha. Settlement patterns can be mainly characterized by small and dispersed villages, frequently located along secondary rivers. In the Capulín-Carara and Jesús María areas, settlements were found near secondary rivers but far from the main riverine systems of the area, the Tárcoles and the Jesús María Rivers. Such patterns correspond with the information recorded based on the distribution of settlement patterns for the Central Archaeological Region (Aguilar 1976; Snarskis 1984a).

In the Jacó Valley, archaeological sites were found toward the border of the hills, about 2 to 3 km inland from the coastline. The constant erosive action of small creeks in the area helped to uncover cultural remains, and an occupational floor was found at a depth of between 0.5 m and 2.5 m at the Quebrada Seca site. The site was covered by a layer of soil, with no evidence of cultural remains. Based on reports from the local inhabitants, the coastal line has been extending gradually. This could indicate that at the time of pre-columbian occupations, the settlements could have been located closer to the coast (Corrales 1990).

No evidence of architectural remains were found in this phase. Remains of a hearth were found in the Quebrada Seca site, located on the coastal area of Jacó. The hearth contained charcoal and burned soil along with organic remains of seeds identified as an early variety of pejibaye palm.

Evidence of maize agriculture has been indicated by the recovery of mannos and metates. However, gathering activities seem to have been of considerable importance. Significant amounts of carbonized seeds identified as the early variety of peñibave (*Bacris gasipaes*) have been found in domestic areas and stratified deposits in the Sierra Seca site and at sites in the littoral plains of Jacó (Corrales and Mora Urpi 1990). More seed remains identified as coyol palm (*Acrocomia vinvifera*) were found in stratified deposits of the Fragata and Madrigal sites, located on the Jacó Valley (Corrales 1990). Evidence of gathering activities from this phase is comparable with the data collected from other areas of the country during the same chronological occupation. Between 300 B.C. and A.D. 300, horticultural gathering patterns seem to have been complemented by maize and other crops (Acuña 1985; Drolet 1988).

Although the sites were located near the coast, no evidence of marine fauna has been found in archaeological context, except for the remains of a fish vertebra found in Quebrada Seca. However, the absence of marine remains may be a result of the limited systematic research applied to the area. Recovery techniques may not have been appropriate for recovering such remains.

The ceramic assemblage consists mostly of small and medium vessels, plates, and tecomates, decorated with red-orange slip and colored with zoned-purple bands. Decorative techniques include nail incisions, modeled zoomorphic motifs, appliqué, and reed impressions (Corrales and Quintanilla 1986; Solís Alpizar 1991; Artavia 1988). Such decorative motifs are similar to those found in the ceramic typology of the Central Region during the same chronological occupation (Aguilar 1975, 1976). Lithic artifacts such as flakes and fragments of jasper and quartz appear, along with mannos and metates made from volcanic material and associated with food-processing activities, especially for maize.

The necessity for a more complex organization to attend to the needs of agriculture, the redistribution of the collectivized community output, and a marked growth in population facilitated the establishment of a chiefdom system of organization.

Curridabat Phase (A.D. 300–900)

The consolidation of chiefdoms occurred during this phase. A marked social hierarchy developed with greater mechanisms of political control and distribution of surplus production. Based on the stylistic characteristics of the ceramic, the Curridabat phase has been subdivided into two periods: an early period (A) and a late period (B) (Arias and Châvez 1985).

The temporal distribution of the Curridabat phase within the Central Pacific (A.D. 300–900) is based on formal associations with other sites from

the same phase, which are distributed along the Central Valley, as well as with chronological sequences of ceramic types distributed within the Greater Nicoya region and with radiocarbon dates obtained from a domestic hearth at the La Malla site, dating to A.D. 640 ± 60 (Beta Analytic 16984). Settlements were identified along the Tivives mangrove, the middle basin of the Río Jesús María, and the lower basin of the Río Tarcoles. Most of the sites are culturally affiliated with the later occupation of the Curridabat phase.

During the Curridabat phase, villages were established along the periphery and inland areas of the Tivives mangrove, associated with the mouth of the Río Jesús María, and in the coastal plains of Salinas (Quintanilla 1988a, 1990). La Malla, Brazo Seco, and Laguna Grande are all archaeological sites that have been identified in the mangrove. They are characterized by earthen mounds but have none of the associated river cobblestone structures that have been observed in other sites of the region during the same occupational period. The absence of river cobbles may be explained by their scarcity in the area; the Río Jesús María does not have enough flowing capacity to carry big cobbles. It is assumed that habitational structures were built on top of the earthen mounds, as a measure to avoid seasonal flooding caused by an increase in the water level of the Río Jesús María during sea level changes. Elevation and diameter of the earthen mounds varied from 30 cm to 2.5 m in height and from 17 m in diameter at the Laguna Grande site to about 25 m at the La Malla site.

At the La Malla site (Figure 5.5), a structure delimited by ceramic fragments and resembling a hearth or oven was found in association with wood remains; the wood from the mangrove makes an excellent fuel. In this site, circular structures were made using ceramic fragments, discarded shells, and clay (Figure 5.6), which could have served, among other possible functions, as water reservoirs for the maintenance of live *pianguas* (shellfish) (*Anadara tuberculosa*) (Quintanilla 1988a, 1988b, 1990). The mangrove presents particular characteristics for human habitation, among them constant flooding, limited resources of fresh water, abundance of fish and mollusks, and access to wood.

Intensive analysis of the data from the La Malla site, which is located on the interior edge of the mangrove, suggests the frequent migration of La Malla inhabitants toward the mangrove for the extraction of products exclusive to this particular ecosystem. The products were likely utilized as part of a developed trade network at the regional level. Some of the resources obtained from the mangrove were mollusks, in particular the *piangua* and estuarine fauna from the Río Jesús María and wild game, such as the iguana (*Iguana*). Other activities included salt production and the processing of tannin and mangrove fibers (Quintanilla 1990).

Quintanilla (1990) argues that mangroves were inhabited for the permanent exploitation of natural resources, complementary to the practice of agricultural activities. Maize production developed inland, which caused

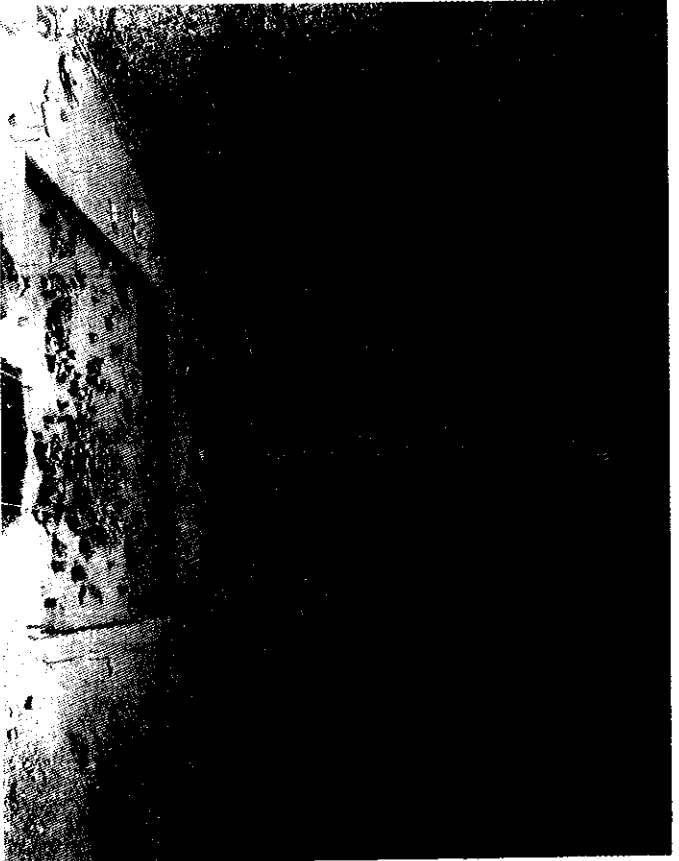


Figure 5.5 General view of the excavations at the La Malla site, Tivives mangrove.

regional integration of settlements. This argument is supported by similarities observed between ceramics found in the La Malla and Alfaro sites, the latter located about 10 km inland from the coast. Such integration of settlements could have involved the mutual exchange of local resources. For instance, salt and mollusks may have been traded inland from the coast, with crops and lithic tools traded to the coast from inland sites. Another alternative to regional integration could be that both regions (mangrove and inland) were occupied by a single population, which was continuously migrating, inhabiting, and exploiting both areas.

One of the best-known sites from the Curridabat phase is the previously mentioned Alfaro site, which is located in the middle basin of the Río Jesús María. The site is a village characterized by architectural remains of ten earthen mounds with stone foundations, covering an area of about 5 ha (Artavia 1989). Other sites, such as Lomas Entierros and Carara in the middle basin of the Río Tárcoles, were characterized as transitional settlements between the Curridabat phase and the Cartago phase, based on the ceramic characterization. Lomas Entierros represents a large (ca. 5 ha) village of complex social organization (Herrera and Solís 1988a, 1988b), and Carara is exemplified by a single rectangular habitational structure measuring 4 by 6



Figure 5.6 Structure made from shells, potsherds, and clay, La Malla site, Tivives mangrove.

m. The Carara site is located near the Lomas Entierros site (Corrales and Quintanilla 1986).

An increase in social complexity and variation in architectural forms is observed during the cultural transition between the Curridabat phase and the Cartago phase. Near the beginning of the Cartago phase, habitational and funerary patterns are characterized by circular and rectangular structures. Similar structures are observed in the Central Valley from the La Fábrica site in Grecia and the Centro Nacional de Abastecimiento (CENADA) site located near San José. In these sites, habitational patterns are distinguished by nuclear foundations of household units delimited by river cobbles.

During the Curridabat phase, agricultural chiefdom societies characterized the social organization of precolumbian groups along the Central Pacific, the Central Valley, and the Atlantic watershed. Such societies reached their maximum complexity by the Cartago phase (Snarskis 1981a; Arias and Chávez 1985; Corrales 1988a).

Ceramic complexes from the Curridabat phase are very homogeneous. Most of them are represented by globular vessels with everted rims, no

supports, and few handles. They are orange with decorative designs that combine four different techniques: purple paint in wide bands, white paint in narrow lines, wide incision, and the appliqué. An interesting fact is the absence of tripod vessels with lizard motifs, which have been identified as chronological markers for the Curridabat phase A (Arias and Chávez 1985). However, ceramic materials decorated with cream paint on purple and associated with incisions and appliqués that are similar to ceramics found in the Central Valley, especially at the La Fabrica and CENADA sites, have been recovered.

An important aspect observed during the late occupation of the Curridabat phase along the Central Pacific is the presence of traded ceramic material from the Greater Nicoya Archaeological Region. Ceramic types from the Greater Nicoya sequence identified as early Galo and Carrillo Polychrome (A.D. 500–800) were found in the Alfaro and La Malla sites.

The exploitation of mangrove resources during the Curridabat phase within the Central Pacific is explained by the unique historical-ecological characteristics of each geographical region, and it came in response to the particular sociopolitical dynamic of a village-chieftdom lifestyle.

Cartago Phase (A.D. 900–1500)

Human occupation in this period corresponds to the last precolumbian settlements before the Conquest during the sixteenth century. The number of sites in this phase increases, as do their areas, with some reaching approximately 5 ha; there is also evidence of increased social complexity and differentiation. The enlargement of the size of certain sites, together with a greater refinement of structures such as mounds, foundations, and paved causeways, is associated with larger populations, a control of the workforce supported by shared authority, and hierarchical settlements with a principal town and subordinate villages.

Within the Central Pacific zone, the distribution of settlements during this phase varied, and habitational and funerary remains were found at three locations: in the hilltops of the Río Tárcoles, at the Capulín-Carara area, and along the terraces of the river. Other structures were also identified on the plain and rolling areas of the Salinas-Tivives, the uplands of the Río Jesús María, and the lower basin of the Río Parrita.

Differences in social organization were observed among the sites, based on an apparent hierarchical style of territorial organization. The less complex sites only had a surface distribution of ceramic and lithic remains; other sites had architectural complexity, suggesting that they could have been main settlements.

The principal settlements had areas averaging 5 ha. The main occupational area was characterized by nuclear architectural units (foundation and earthen mounds), surrounded by small habitational units and farming fields. For instance, the Lomas Entierros site is characterized by an extensive and complex village located on the mountainous border close to the mouth of the

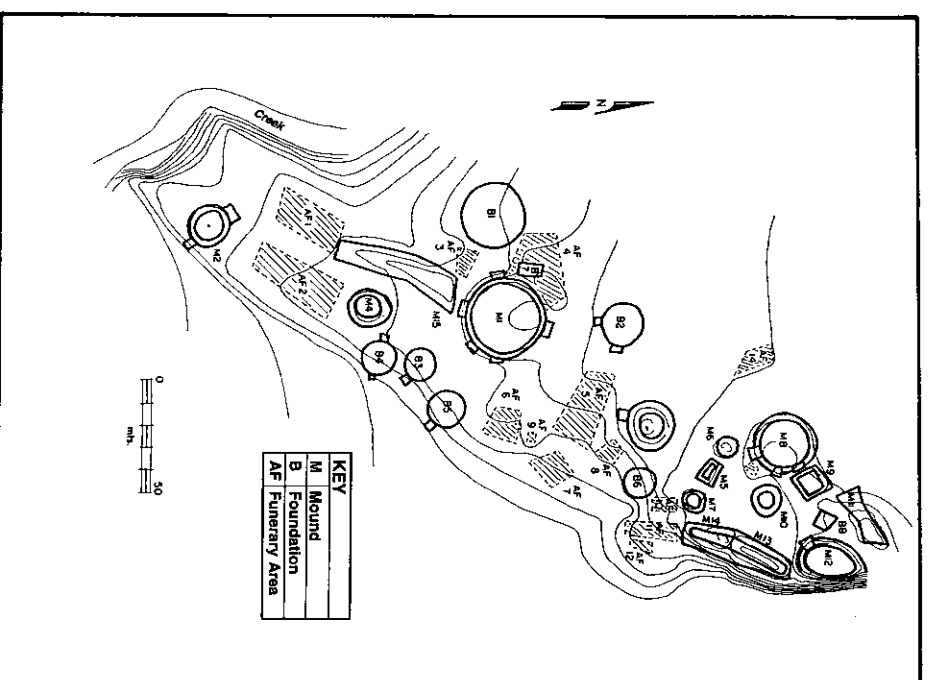


Figure 5.7 Pozo Azul archaeological site: locations of mounds, foundations, and cemetery areas.

Río Tárcoles. This location suggests a strategic position for defense as well as for control of the river, considering that the Río Tárcoles constituted an important waterway access to the central region of the country. The difficulty of access to the site and its control over an extensive panoramic view were characteristics that provided both safety and territorial dominance to the local inhabitants (Herrera and Solís 1988a, 1988b).

Similar features are observed in the Pozo Azul site (Figure 5.7), located in the valley of the Río Parrita between the Parrita and Candelaria Rivers, at the foot of the central mountain range. Habitational structures associated with river cobbles in the form of artificial mounds, foundations, pebble pathways,

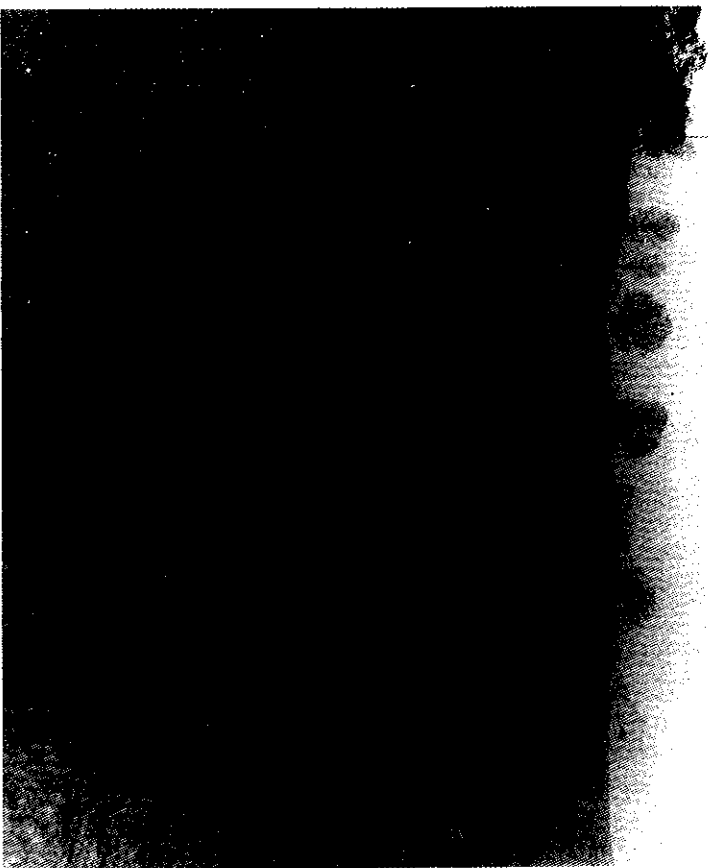


Figure 5.8 Mound with walls of river cobbles, Pozo Azul site.

and funerary features were observed (Figure 5.8). These features indicate a stratified social organization and the involvement of a large labor force in the construction of the structures (Corrales and Quintanilla 1989). The arrangement of structures and changes associated with the topographic surface of the floor suggests the presence of a stockade around the settlement, similar to the one described by Juan Vázquez de Coronado at the Coctu settlement in the Southern Pacific (Fernández 1976). Based on the internal organization and distribution of the Lomas Entierros and Pozo Azul sites, it is argued that they were important regional socioeconomic and political centers.

Another site with smaller spatial dimensions (1 ha) and evidence of architectural remains but of lower social complexity is the Jesús María site. The site includes a complex of seven habitational structures built with river cobbles (Corrales 1987b; Solís Alpizar 1988a, 1988b; Badilla 1989). The settlement is located on an extensive plain covered by fertile soils, which were beneficial for the agricultural development of maize, beans, and squash.

In the Carara, Pozo Azul, and Jesús María sites, habitational structures are characterized by nuclear units of circular or rectangular foundations. In

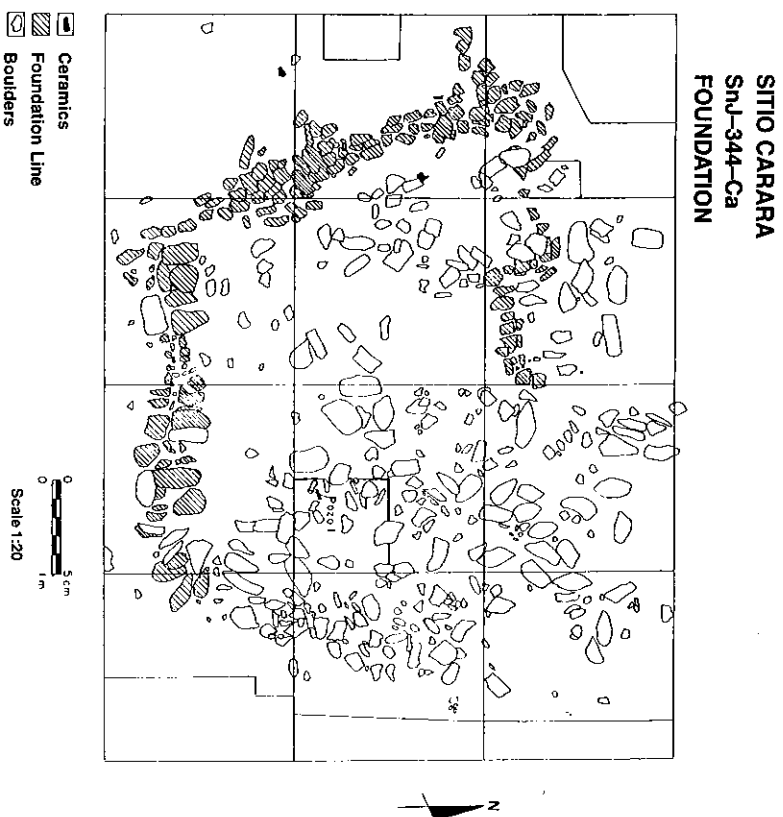


Figure 5.9 Carara archaeological site: plan of rectangular foundation.

the Pozo Azul and Jesús María settlements, rectangular structures are associated with circular foundations. Based on the differing distribution of ceramic and lithic remains, on ethnographic comparisons, and on soil analysis, it is possible to suggest that the rectangular structures in the Jesús María site could have been utilized as storage rooms (Solís, personal communication 1990). For the Carara site, there are indications that rectangular structures could have been associated with special functions (i.e., ceremonial or religious) (Figures 5.9, 5.10. Mortuary practices within the region are not well known during the Carrago phase, but some generalizations can be made. Frequently, cemeteries are located on hilltops outside the settlements (La Trepada site), but in other cases, they are within the settlement (Lomas Entierros and Pozo Azul sites). Burials with walls made of river cobbles were found in artificial mounds, and in general, burials



Figure 5.10 Rectangular foundation, Carara site, lower Tárcoles River basin.

identified as those of the *tumbas de cajón* ("stone cist") type, made of cobbles or characterized by rectangular columns (the use of wood is completely eliminated in the construction of the tombs) (Vázquez 4). A general pattern of funerary offerings is observed throughout the region, especially the presence of polychrome vessels from the Greater oya Archaeological Region. Although several informants have indicated the existence of a great variety of burials, the only types archaeologically recovered are: (1) secondary burials associated with ceramic goods, (2) primary extended burials within *tumbas de cajón* (Herrera and Is 1988a).

Development of agricultural activities associated with crop production, especially maize, is indicated through the recovery of tools and agriculture-related utensils. Gathering activities emphasized the collection of coyol palm (*rocemia vinifera*) fruits, for which stones with small circular depressions at the size of the seeds were used for processing. The coyol is a palm in which a fermented sap is obtained. The celebration of feasts where fermented beverages were served has been suggested as one of the means by

which the leaders of communities obtained support to consolidate their positions and integrate the group (Hoopes, this volume).

Among the lithic tools found within the sites that are identified with agricultural activities and food processing are axes and adzes made of basalt. Other materials related to specific agricultural procedures include metates and manos made of volcanic material, which were used for food-processing activities. In some cases, metates were utilized as funerary offerings. This use is demonstrated by their variety in shape and size; other instruments made of jasper and chert were possibly used as scrapers or knives and were also found in association with cores and flakes.

In terms of the ceramics, the Carago phase presents a heterogeneity in shape, composition, and decoration when compared to earlier ceramic complexes. Ceramic forms are represented by pots, bowls, and handled ladles, and decorative techniques are dominated by appliqué, incision, and punctation. Long, hollow supports are adorned with anthropomorphic and zoomorphic motifs. The Central Pacific ceramic complex is similar to those in the Central Valley and the Atlantic watershed, although it is clear that there is an absence of the bichrome types frequently observed in the former regions. However, a quantity of polychrome ceramics from the Greater Nicoya was found, especially Mora Polychrome, Papagayo Polychrome, and Altiplano Polychrome, among others. In Lomas Entierros, La Trepada, and Carara sites in the lower basin of the Río Tárcoles, the distribution of polychrome accounts for about 35 percent of the total ceramic assemblage.

The development of agricultural subsistence patterns, especially the exploitation of maize, allowed the population to have a food surplus, which permitted a related population growth. Interpretations on the basis of local ethnographic data (Barra 1990) allow us to propose an increase in social stratification, reaching the level of "chiefdom." Although the society is characterized by an egalitarian organization, internal differences are observed with the consolidation of a chief with increased power and the formation of chiefdom confederations, implying the existence of a main chief and secondary chiefs. For instance, the chief Garabito controlled most of the Central Archaeological subregion, as it was recorded in the chronicles by the Spaniards (Fernández 1976). In each zone there were local chiefs subordinated to Garabito. For Costa Rica in the sixteenth century, the chiefdom featured a social organization characterized by a specialization of labor defined by several factors: political and kinship relations within villages, political and subordinate relations between villages, and the hierarchical organization of settlements by lineage (Barra 1990:30).

During this phase, the Central Pacific shows the same characteristics as the Central Valley in terms of the existence of main political and economic centers, along with a territorial division and competition of resources. The main centers were distinguished by exchange relationships, but conflicts were also frequent between them. This was the situation observed by the Spaniards at their arrival during the sixteenth century (Oviedo y Valdés 1976; Barra 1990).

TABLE 5.2 Greater Nicoya ceramics in central Pacific sites

	Mora Polychrome	Santa Marta Polychrome	Birmanta Polychrome	Altiplano Polychrome	Papagayo Polychrome	Jicote Polychrome	Guillen Black/Tan	Galo Polychrome	Carrilo Polychrome	Rosales Bichrome	Piches Rojos	Inciso Unidentified	Unidentified
Carara	17	—	4	3	1	—	—	—	—	—	—	—	8
Lomas Entierros	41	4	31	9	16	7	—	—	—	—	1	13	34
La Trepada	14	6	4	—	1	—	—	—	—	—	—	—	—
El Indio	3	—	—	1	—	—	—	—	—	—	—	—	—
Guacamaya	1	—	—	—	—	—	—	—	—	—	—	—	—
Tárcoles 2	—	—	—	2	—	—	—	—	—	—	—	—	—
La Malla	—	—	—	—	1	—	—	—	2	1	—	—	—
Poza Azul	—	—	1	—	—	—	—	—	—	—	—	—	—
Alfaro	—	—	—	—	—	—	—	10	—	—	—	—	—
Jesús María	6	1	—	—	—	1	1	2	—	—	—	—	—
Pozo Azul	34	—	—	15	1	—	—	—	—	—	—	—	22
Total	116	11	40	30	20	8	1	12	2	1	1	13	64

Source: Corrales and Quintanilla 1986; Corrales 1987; Herrera and Solís 1988; Solís 1988; Quintanilla 1988; Artavia 1989; Badilla 1989.

domesticated tapir, cloth, salt, hammocks, the fragrant sarsaparilla vine, animal skins, etc. Polychrome ceramics could have been traded for these or other products by a direct exchange in the boundary areas. It is important to take into consideration the evidence of ceramic materials from the Central Valley found in southern Greater Nicoya during early occupations. Ceramic vessels from the early Curridabat phase (A.D. 300–600) were found (Guerrero, Solís, and Herrera 1990) in funerary contexts in archaeological sites dating to the Tempisque period in La Pacifica near Cañas. Similarly, ceramic vessels from the El Bosque phase (Atlantic Subregion) and Curridabat phase (Central Pacific Subregion) were found in the El Carmen site at Hacienda Mojica (Ryder 1986:109, 113). Finally, Hoopes (1987:426–428) reports the presence of ceramic materials from El Bosque and La Selva phases in the Tilarán area. Guerrero, Solís, and Herrera (1990) and Hoopes (1987) suggest that the presence of these ceramic elements in the Guanacaste area represents an exchange or commerce between these areas. Ryder (1986) emphasizes that the initial movement of ceramics from the Central Region to the southern Greater Nicoya area is apparently reversed at some point after A.D. 800, during the Sapóá period.

A better way to understand the unequal distribution of polychrome material in the Central Pacific is through the location of intermediate sites occupied during the exchange of products from zone A to zone B (model 4 by Renfrew 1975), cited by Lange (1983). Documentation exists showing that sites or communities playing such roles existed during the sixteenth century. Such was the case for the Pacaca settlement, located in a boundary area between the Central Valley and southern Greater Nicoya. Pacaca was a kind of market for the exchange of merchandise and products from other places, visited by neighboring communities and settlements to exchange products (Snarskis and Ibarra 1985:62). Such ethnohistorical data suggest the existence of other similar centers in the Central Pacific for earlier occupations. The roles of the Lomas Entierros and Pozo Azul sites could be interpreted following this line of evidence, given the high percentage of polychrome ceramics found in both sites. Archaeological data identified Lomas Entierros and Pozo Azul as economic and political centers (redistributors), based on evidence of their social complexity and strategic locations. From their advantageous settings, they could have dominated and controlled the exchange of products. On the other hand, the distribution of polychrome ceramics in sites located along the Río Jesús María and the Río Tárcoles reinforces the argument that the valleys of both rivers functioned as natural access routes to the Central Valley because the rivers end in front of the Gulf of Nicoya.

Another aspect that deserves discussion is the symbolic role acquired by the polychrome ceramics among the precolumbian populations of the Central Pacific. The absence of painted types from the Central Valley is notorious in the sites from the zone. Therefore, we consider that the polychrome

ceramics from the Guanacaste region were substituted for lack of painted types from the Central Pacific, becoming the most frequent ceramic ware and expanding from their utilitarian use to a possible symbolic class of artifacts associated with social status.

Finally, it is important to consider the decrease of polychrome ceramics during the late precolumbian occupation in the Central Pacific. Ibarra (1988) mentions that by the sixteenth century, precolumbian groups from the Central Region, specifically the chiefdom of Garabito, had moved toward the north and controlled access to the Gulf of Nicoya. This expansive movement of the Garabito chiefdom was initiated during the Cartago phase (A.D. 900–1500), which explains the decline of polychrome ceramics during the Ormepe period (A.D. 1350–1520) in the Central Region.

Thus, exchange relations developed between the Central Pacific, the Central Valley, and Greater Nicoya, and they were subjected to the kind of social organization and to the constant conflict that developed between chiefdoms for political and economic control of products. Territorial divisions and regional and local stratification of settlements determined the routes of exchange for the ceramic material from Guanacaste, as well as their use in utilitarian and ceremonial practices within the populations of the Central Region.

CONCLUSION

The research developed by the Central Pacific Archaeological Project establishes basic elements for the understanding of precolumbian societies in the Central Pacific zone of Costa Rica. However, there are other aspects that still require clarification.

Although the Central Pacific was culturally integrated into the Central Archaeological Region of Costa Rica, this should not diminish the central Pacific's own particular characteristics. As a zone bordering on Greater Nicoya, it actively participated in the interchange of products with that region. On this active border, the constant process of expansion and retrocession was carried on over centuries. In like manner, the dynamics of the relationship between Greater Nicoya and the Central Region varied according to the different temporal periods.

The process of colonization or indigenous development of the area in early times is not sufficiently understood. Recent investigations do not permit documentation of occupations earlier than 300 B.C. to A.D. 300. What remains to be clarified is whether this area had earlier occupations or whether it was settled relatively later by groups from Greater Nicoya or the Central Region.

It is evident that at least since 300 B.C. (based on the lower temporal limit of the Pavas phase), intensive occupations were developed, especially on the coast. The arrival of a variety of "proto-pejibaye" at the Quebrada Seca site

from the Pavas phase reinforces the perspective of a mixed agricultural system in early times. The interpretation of the emergence of a hierarchical society is based on evidence at the regional level that indicates the appearance of symbols of rank.

During the Curridabat phase, there began a hierarchy of settlements and a dynamic region that included the relationship of coastal and inland groups. The existence of these people is documented by the similarities of the occupations of the Tivives mangrove and the Jesús María river drainage. Various large and internally complex sites in strategic localities establish the importance of the area in late periods and confirm the consolidation of chiefdoms as a form of social organization.

At the same time, however, it is necessary to closely investigate the role played by the Central Pacific zone in the expansion of groups from the Central Region, in the direction of the southern sector of Greater Nicoya and the concurrent establishment of some Chorotega groups in the Central Pacific zone.

Also, it is important to consider the control of the maritime coast, which was made up of the natural entryway between the South Pacific and the northern zone of Costa Rica. In precolumbian times, the control of major rivers such as the Tárcoles and the Jesús María was crucial for control of access to the Central Valley. The location and configuration of sites such as Lomas Entierros, which is near the mouth of these rivers, suggest a territorial organization whose function was the control of fertile lands and trade routes.

This supports a general interpretation of territorial chiefdoms that were continually struggling for greater power and the control of fertile lands and access to raw materials.