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TRACING THE "ENIGMATIC" LATE POSTCLASSIC NAHUA-PIPIL (A.D. 1200-1500): ARCHAEOLOGICAL STUDY OF GUATEMALAN SOUTH PACIFIC COAST

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by

Carlos Batres

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ABSTRACT

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CARLOS BATRES, for the Master degree in Anthropology, presented on 17 November 2008, at Southern Illinois University Carbondale.

TITLE: Tracing the Late Postclassic "Enigmatic" Nahua-Pipil (A.D. 1200-1500): Archaeological Study of Guatemalan South Pacific Coast.

MAJOR PROFESSOR: Dr. Don S. Rice

This thesis addressed the Late Post-classic (A.D. 1200 – 1500) Nahua-Pipil of the central Pacific coast of Guatemala. It evaluated archaeological settlement plan data and ceramics in association with regional geography, and ethnohistorical accounts in conjunction with GIS tools for their analysis. The goal is to reconstruct Nahua-Pipil sociopolitical organization, testing the hypothesis that it was based on the Nahua *altepetl* system.

DEDICATION

To

María Teresa Batres de Rodríguez

and to the Memoriam of

Aunt Rosaura Escrivá
and
Uncle José E. Batres

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CHAPTER I.

INTRODUCTION

The Nahua-Pipil of the central Pacific Coast of Guatemala was a group of Nahuatl speaking people, who were thought to have migrated from Mexico at approximately A.D. 850-900. The first evidence for their presence in Guatemala is dated to A.D. 1200-1500 during the Late Postclassic period (Bove, *et al.* 2004). For nearly a century the Nahua-Pipil have been investigated archaeologically, however, little is known about the characteristics of their archaeological assemblage. Their presence in Guatemala remains a topic of much debate. This thesis focuses specifically on their settlement plan and site hierarchy in order to provide a better understanding of the social organization of this non-Maya group. In addition, this thesis tests the assumption that the Carolina, Caulote, Costa Rica, El Jute, Esperanza, Gomera, Las Playas, Nuevo Mundo, Pajuil, Yolanda, and Izcuintepeque sites (see Figure 1) embodied the sociopolitical structure known as the *altepetl* (or Nahua ethnic city-state).

Nahua-Pipil Background Investigations

Nahua-Pipil studies began with studies of Spanish colonial documents. These documents described how this group migrated from Mexico to Central America, in addition to numerous other aspects of their culture. In his book Monarquía indiana, Fray Torquemada (1943) recorded the history of the Nahua-Pipil of Nicaragua in Central America at the time of Conquest. According to this document, the Nicaraos said they were originally from "Xoconochco"

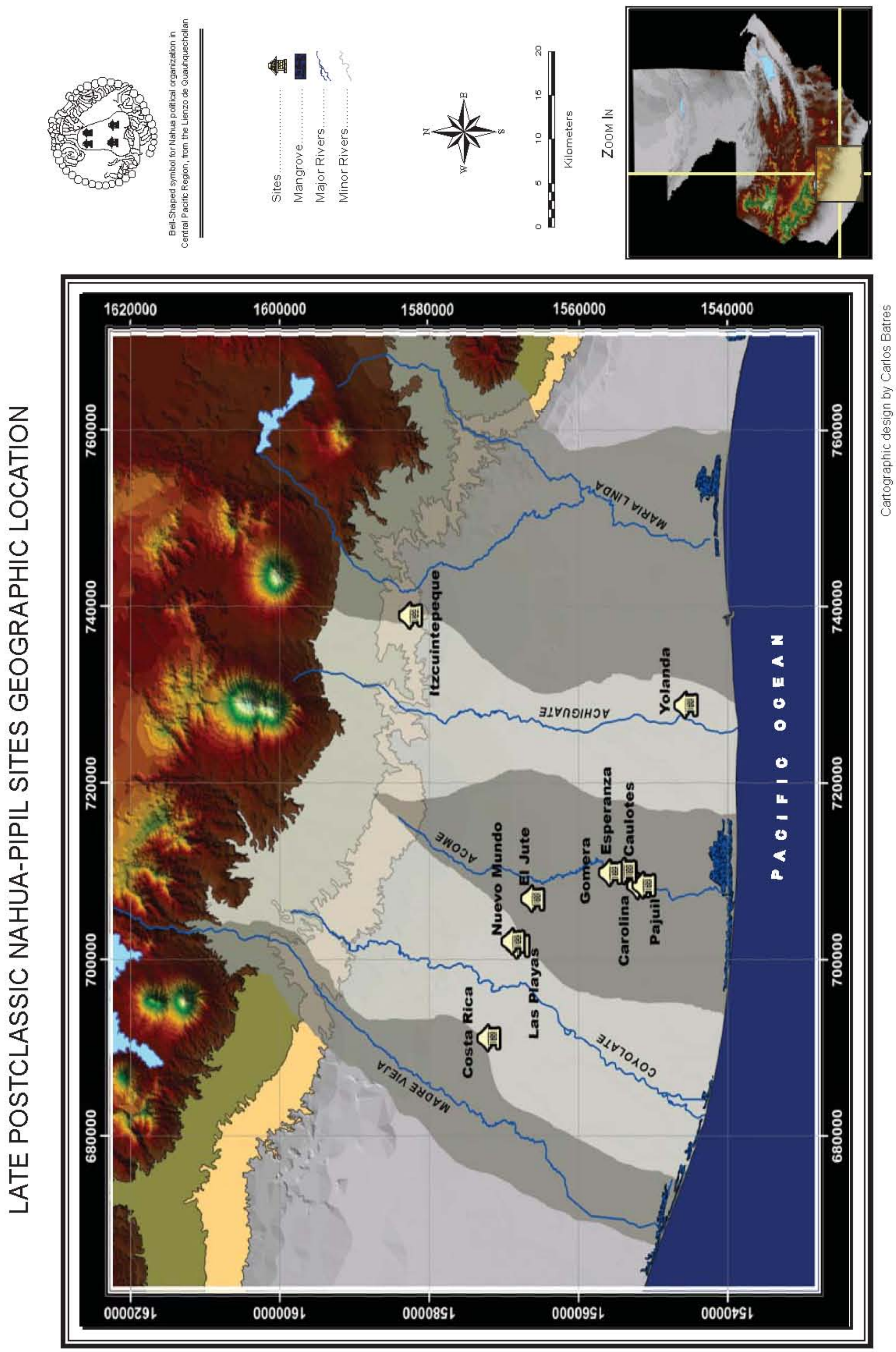

Figure 1: Central Pacific Coast Late Postclassic Nahua-Pipil sites

(Soconusco, Mexico). When they were forced to leave their home, they moved through "Quauhtemallan" (Guatemala) on the South Sea, through the territories of native peoples of this land. When they found good lands, they settled in them. According to Torquemada, the migrants who settled in "Yzcuintlan" (the modern town of Escuintla[1], Guatemala) were called the Nahua-Pipil (Torquemada 1943:Vol.1, pp.331-333). This account provides the basis for modern scholarship on the Nahua-Pipil migration to Southern Mesoamerica and the source from which possible dates for their migration(s) have been suggested.

The first proposals were based primarily on Torquemada's accounts and focused on differences in Nahautl dialects. Walter Lehman (1920:1005) hypothesized that the Nahuatl dialect spoken by the Nahua-Pipil in El Salvador corresponded to a conservative variety of the earlier stage of the Nahuatl language. Based on the differences observed in word endings (e.g., /tl/, /l/, and /t/) between the Nahuatl language in El Salvador and Nicaragua, he proposed that the Nahua-Pipil population from El Salvador first arrived at A.D. 300, while the Pipil-Nicarao from Nicaragua arrived at A.D. 886-966. Using Torquemada's accounts and the expression "it was seven, or eight ages, or lifetimes of old men" since they arrived, Lehman interpreted seven or eight (ages) to mean seven or eight, eighty-year periods (the lifetime of old men), giving the result, 560 to 640 (years ago). He subtracted this number from the year 1526 (the year this account of the oral tradition was registered) and obtained a range between A.D. 886 and 966 for the date of Pipil-Nicarao migration to Nicaragua (Fowler 1989a:36-37).

Later, Lehman's methodology was used by Eric Thompson and Wigberto Jiménez Moreno to date the Nahua-Pipil migration to Guatemala. However, they

1 The name of the region or city of Escuintla, depending upon the chronicler, document, or dialect, the city's name has many variations, including: Yzcuintlan, *Izcuintlán, Izcuintepec, or Itzcuintepeque.*

based their calculations on the word *huehuetiliztli*, referred to in another segment of Torquemada's account, which Lehmann (1915:4; 1920:2, 1006) thought corresponded to the Mexican period of two 52-year cycles (104 years). Using these parameters, Thompson and Jiménez Moreno postulated that the Nahua-Pipil intrusion into the South Pacific Coast of Guatemala occurred at ca A.D. 750-850 (Thompson 1948:11) or A.D. 748-852 (Jiménez Moreno 1959:1077; 1966:67).

Thompson's (1948:49) concern with the Nahua-Pipil migration was the ethnic identification of settlers in the Cotzumalguapa area located in the Pacific *bocacosta* or piedmont region of Guatemala. He saw similarities between the Cotzumalguapa monumental art style and the mythological elements of Mexican art. Thompson concluded that this area was locally developed and that the Nahua-Pipil had arrived later to the region. He suggested that these were a migratory people that had moved from Mexico to the Pacific coast of Guatemala between A.D. 750-850.

Jiménez Moreno (1966) saw similarities in the iconography of Cholula, Gulf Coast of Mexico, and the Cotzumalguapa art style of Guatemala and used these as support for his migration proposals. Relying on Eduard Seler's (1892) observation of patterns in ballgame artifact distribution (e.g., *yugos* [yokes], *hachas* [axe], *palmas* [palms]) in Southern Mesoamerica, Jiménez Moreno attempted to provide further archaeological support of his proposed Nahua-Pipil migration route. On the basis of these combined data, Jiménez Moreno (1966:Map 6) suggested that the Nahua-Pipil moved out of Cholula and Cerro de Las Mesas through the Gulf Coast, to the Pacific Coast of Soconusco and then to Guatemala at A.D. 748-852, where they settled in the Cotzumalguapa region and then migrated further south to El Salvador and Nicaragua.

The idea of non-local developments on the Central Pacific coast was

reinforced by Edwin Shook (1965), whose extensive surveys did not show evidence of pre-agricultural or pre-ceramic cultures in the region. In the lower coastal plain Shook (1965:182) found intensive occupations from the Early Classic period (A.D. 250-600), concluding that the region was most densely populated during the Late Classic period ca A.D. 600-800 (Shook 1965:191). The lack of pre-agricultural, pre-ceramic local antecedents plus the need to explain the Mexican influences in the art of Cotzumalguapa, supported ideas of foreign intrusion into the South Pacific coast region from Mexico (Kerr 1998:27).

Addressing the problem of Mexican cultural influences in southern Mesoamerica, the Milwaukee Public Museum team, led by Stephan F. de Borhegyi and Lee Allen Parsons, investigated the site of Bilbao in the Cotzumalguapa area (Parsons, *et al.* 1963). Borhegyi (1965:38-39) elaborated Jimenez Moreno's Nahua-Pipil migration synthesis and postulated three stages of movement. Parsons (1969:150-159) thought that the strongest cultural influence on the monumental Cotzumalguapa art style came from Teotihuacan.

Borhegyi (1965:39) also saw the site of Teotihuacan as the source of Mexican traits in southern Mesoamerica. He suggested that the outside influences on the Cotzumalguapa art style came from the Nahua people that inhabited Teotihuacan. Borhegyi based this idea on Jiménez Moreno's (1959) work , who thought that the city of Teotihuacan was inhabited by Nahuatl speakers[2]. In Jiménez Moreno's view, the cause for the Nahua migration out

2 The link between the city of Teotihuacan and Nahuatl speakers has long been debated (see Borhegyi 1965; Coe 1962:115-116; Cowgill 1992:238-240; Jiménez Moreno 1959:1076-1977; Sahagún 1959:Book 10; Taube 2000). Other debates focus on the relationship of this city to other groups such as the Toltecs (Ixtlilxochitl 1891:Relación I, p. 38; Jiménez Moreno 1966:3-82), Totonacs (Justeson, *et al.* 1985; Kaufman 1989:7; Torquemada 1943:bk. III, ch. 18, p. 278), or Mixe-Zoques (Campbell and Kaufman 1976:84-86; Kaufman 1976:114). The linguistic and ethnic affiliations of Teotihuacan are still debated. Although there is no clear evidence that the Nahuatl language was spoken in Teotihuacan (Macri and Looper 2004:293) and it is not possible to directly establish that Teotihuacan was responsible for the Nahuatl influences found in Southern Mesoamerica during the early Classic period, Fowler (1989a:39) has proposed that this city and its economic and political networks were responsible indirectly

of Central Mexico was the expansion of the Teotihuacan polity during the fourth century and the Nahua people's "diaspora" during the middle sixth century (Fowler 1989a:38).

In Borhegyi's (1965) model, the "Teotihuacan-Pipil" or Nahua-Pipil people migrated from Central Mexico to the Gulf Coast and then to the Pacific Coastal region of Mexico, eventually moving into the Guatemalan central Pacific coast region ca A.D. 400-500.

Borhegyi (1965:39-40) also proposed two later Nahua migrations to Central America that he classified as the "Tajinizade-Teotihuacan-Pipil[3]" and "Nonoalca-Pipil[4]" migrations. He stated that Tajinizade-Teotihuacan-Pipil people moved from the Gulf Coast of Mexico to the Southern Mesoamerica periphery ca A.D. 700-900 during the first migration, and that the second migration of "Nonoalca-Pipil" occurred ca A.D 1000-1200. In this way, Borhegyi explained the origins and spread of foreign Mexican influences in the southern Mesoamerican region.

Lee Allen Parsons (1969:164) observed several sources of Mexican influence in the Cotzumalguapa art style, but attributed the strongest of these to Teotihuacan. He dated Cotzumalguapa monuments to the Middle Classic period (ca. A.D. 400-700), which corresponded to the date of Teotihuacan expansion into southern Mesoamerica. Unlike Borhegyi, Parsons did not think that the Teotihuacan population was Nahuatl speaking and consequently, did not link Nahua-Pipil peoples to the influences that he observed in the monumental Cotzumalguapa art. In response to the discussions of the Nahua-Pipil in the Cotzumalguapa area, Parsons (1969:150) posited that if it were possible to

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for the early Nahuatl-speakers' contact with Southern Mesoamerican populations, specifically Maya populations.

3 This involves both central Mexican and the Gulf Coast Nahuatl-speakers that were culturally integrated in the Gulf of Coast (Fowler 1989a:45).

4 The Nonoalca are a multiethnic group from the Mexican Gulf Coast region that adopted the Nahua culture (Fowler 1989a:47).

determine the language spoken at Teotihuacan, and if this language were Nahuatl, there would clearly be an attachment to these people but there is not yet clear support for this proposal.

Parsons saw strong similarities between ballgame artifacts (including only *yugos* and *hachas*) in the archaeological remains of the Cotzumalguapa region and the same artifacts found in Veracruz and the Gulf Coast regions of Mexico (Parsons 1969:67). However, he rejected the idea that the Mexican style of these artifacts corresponded to Nahua speakers and certainly not to the Nahua-Pipil population described or known at the time of conquest in the Pacific coast of Guatemala (Parsons 1969:189).

Both, Parsons and Borhegyi, were in agreement that the monumental Cotzumalguapa art style had strong Mexican influences from Veracruz, Gulf Coastal Mexico, and Teotihuacan. However, they differ about whether these influences could be attached to the Nahua-Pipil. In Borhegyi's view, Nahuatl speakers or Nahua-Pipil settlers arrived from Teotihuacan to Cotzumalguapa region during the fifth century. For Parsons, the Cotzumalguapa art style was the evidence that its builders were linked with Teotihuacan inhabitants, but the people of both areas were certainly not Nahuas. The Nahua-Pipil presence in the Guatemalan central Pacific coast region continued to be a matter of discussion in terms of archaeological site associations and the chronology of migrations.

In his investigation on the southern Mesoamerica Nahua-Pipil population, William Fowler (1981; 1989a; 1989b; 1989c; 1995) offered a synthetic discussion about the Nahua migrations. He concluded that these migrations were a complex series of displacements of Nahua peoples to southern Mesoamerica. According to Fowler (1989a:38-49), these migrations started during the Late Classic period in Central Mexico. Subsequently, the Nahua moved to the

Gulf Coast region, then to the Chiapas region, and ultimately reached Central America during the Early and Late Postclassic periods. Fowler (1989a:38) attributes either direct or indirect political and economic expansion as the cause of early Nahua relocation to southern Mesoamerica. He rejects the idea that the Teotihuacan population was Nahuatl-speaking and also that the Nahuatl-speaking migration began in central Mexico ca A.D. 400-500.

Linguistic evidence shows divergence of the Nahuatl language dialects in the Gulf Coast regions at ca. A.D. 650-850 (Luckenbach and Levy 1980:409). Fowler (1989a:39-40) sees this divergence as evidence for Nahua movements from Central Mexico to the Veracruz and Tabasco regions. However, he questions whether these people reached Central America at this time. The archaeological record from Guatemala's Pacific Coast indicates that the region was densely populated; however, it is difficult to conceive of an intrusion in the region during that period (Bove in Fowler 1989a:40).

For Fowler (1989a:41), the earliest presence of Nahua populations in Central America is dated to the Early Postclassic period (ca. A.D. 900-1200). At this time the Nahua-Pipil settlements in El Salvador were dense and the archaeological remains (e.g., I-shape ballcourts, Chacmool sculptures, and Xipe Totec figurines) show affinities with the Gulf Coast and Central Mexican regions (Fowler 1989a:44-45). On the basis of this observations and glottochronological reconstructions of Nahuatl language dialectic divergences, Fowler (1989a:41-46) concluded that the Nahua-Pipil moved from the Gulf Coast to Chiapas, Mexico, and then southward to the Pacific coast corridor of Guatemala and into western El Salvador between A. D. 900-1100. These dates are based mainly on archaeological evidence from El Salvador.

In the central Pacific coast of Guatemala, Oswaldo Chinchilla Mazariegos found that there is no similar or comparable evidence that shows the Nahua-

Pipil arrival at this time (Chinchilla Mazariegos 1996:549) because Nahua-Pipil evidence from the Early Postclassic period has not been found (Bove 2002; Bove, *et al.* 2004). Fowler (1989a:46-49) ultimately concluded that a second intrusion by Nahua-Pipil populations into Central America occurred in the Late Posclassic period (A.D. 1200-1524) and resulted in the establishment of the Nahua-Pipil settlements along the Pacific Coast of Guatemala.

Interestingly, there is a continuous occupation from the Late Classic period through the time of Spanish conquest at the Cotzumalguapa Nuclear Zone[5] (Chinchilla Mazariegos 1996:546). Like Fowler, Chinchilla Mazariegos (1996:548) thinks that the Nahua-Pipil intrusion was likely responsible for the downfall of Cotzumalguapa culture. The dating of the Nahua-Pipil migration is significant because the monumental centers of the Cotzumalguapa were abandoned around A.D. 1000-1100. Evidence of continuous occupation of the surrounding Cotzumalguapa region during the Postclassic period by the Cotzumalguapa culture suggests that local peoples, with no connection to the Nahua-Pipil, continued to live there until the time of Spanish conquest (Chinchilla Mazariegos 1996:349, 546, 548).

Frederick Bove and José Vicente Genovez recently addressed the archaeological problems of the Nahua-Pipil population in the central Pacific coast of Guatemala. They began inquiries into the temporal and spatial parameters, material exchange, economic specialization, and subsistence practices of the Nahua-Pipil, as well as the characteristics of their archaeological and cultural assemblages of this ethnic group. Their preliminary conclusions suggested that the presence of the Nahua-Pipil in the region was the result of massive population movements from Soconusco, Mexico only 250 or 300 years before the

5 Chinchilla Mazariegos (1996:fig. 6.1 p. 186, 188), based on the presence of three major sites (e.g., Bilbao, El Baúl, and El Castillo), the distribution of monuments, and the presence of a number of other settlements in an area of 4 km^2, defined the core area as the Cotzumalguapa Nuclear Zone.

arrival (1524) of the Spanish to the region (Bove, *et al.* 2004). As was mentioned before, Bove and Genovez's investigation highlighted the characteristics of the Nahua-Pipil archaeological assemblage. The present thesis, is an extension of their work, focusing on the settlement plan and site hierarchy of Nahua-Pipil sites.

Organization of the Thesis

Chapter 2 explores the theoretical framework that tests ideas about the Nahua-Pipil use of space. Space embodies the actions or beliefs of people, and is shaped by people over space and time. Equally, societies perform activities that construct and reconstruct their natural and social environments. Therefore, landscapes, territories, and places might embody the particular beliefs and structures of one or various societies.

In Chapter 3 combined qualitative and quantitative methods and the techniques used are discussed. These were implemented during the compilation, categorization, and data analysis. Also discussed are the methodological procedures of mapping and survey fieldwork, lab analysis of data, and the creation thematic maps. The methodological exploration of Nahua-Pipil archaeological, linguistic, and ethnohistorical data is also explained, as well as the geocomputation and geographical information system techniques used during the exploration and cross-comparison analysis.

Chapter 4 presents the ethnohistoric descriptions of the Nahua-Pipil that were recorded in the early post-Conquest period. Throughout this chapter, ethnohistorical data create ethnographic and historical framework o of the Nahua-Pipil. The group is discussed in terms of their language, social organization, political and economical domain through or outside of the

central Pacific region, as well as their conquest by the Spanish and Mexican conquistadors.

In Chapter 5 a description of the central Pacific coast geography, as well as sixteenth-century reports on agricultural and economic activities is presented. These data provide a basis for comparison of modern geography and ethnohistorical data. Based on these data, the central pacific coast is seen not as uniform ecological zone but as a series of microecological systems that may have provided to the Nahua-Pipil settlers with a series of products that contributed to their subsistence and economy.

Using a series of thematic maps, the distinctive nature of each site sampled in the investigation is described in Chapter 6. The site plan and geographic domain are explored in relation to their size, proximity, altitudinal zones, rivers, access routes, soil types, hydrological systems, and orography. The site ranking analysis resulted in five observable nucleated areas that reflect not only the sites zones spatial relationship, but also their regional structuration.

In Chapter 7, thematic maps are again used to describe the incidences and tendencies of Ixtacapa ceramic complex in each site and through the central Pacific coast region. Along with the statistical analysis, the level of ceramic group correlation with the Nahua-Pipil population is discussed.

Chapter 8 provides a synthesis of the investigation, results and findings which are discussed in terms of refuting or supporting the assumption that the the Nahua-Pipil of Central pacific coast had the sociopolitical structure of the *altepetl* system. The resulting findings and tendency of the data are presented in the conclusions section.

CHAPTER II.
THEORETICAL FRAMEWORK

For human beings the juxtapositioning of actions, the consciousness of time, the sensation of movement, and the recording of these phenomena to memory, are fundamental pillars that people use to construct and delimit their individual and social spaces. The social construction of space helps human beings give meaning to their origins. The present chapter discusses the variable factors that are present in the creation of individual and social identities, and some of belonging.

Memory and Time Consciousness

Human beings are the conscious agents of their actions (Giddens 1984). Actions are recreated and transformed constantly through the spaces where they are experienced. The experience and perception of external realities occur in the same places where individuals, as active agents, shape space in order to give sense to their particular and collective lives (Barthes 1997:166-172; Mitchell 1992:1-2). These actions, conscious or unconscious, allow human beings to give sense and form to space (Sahlins 1981:14-17). Space is then an area empowered by human actions in individual, social, or institutional terms (Foucault 1983:208). This means that space is not solely an empty matrix, but is filled with human actions that are materialized and conceptualized, and remembered (Bell 1992; Bourdieu 1977; Merleau-Ponty 1962; Quantrill 1987; Rappaport 1985).

Human memory documents experiences through space and time. Memory

includes the recording of physical characteristics and the perception of objects from individual or group points of view. It is through memory that experiences are accumulated, and reconstructed imaginatively (Gupta and Ferguson 1992:42). In other words, memory becomes a symbolic anchor to recreate temporary pictures of the past and present (Bergson 1910), whereby an "impression of continuity" is established (after Husserl in Gell 1992:150).

These temporary pictures are later organized and remembered to different degrees by individuals and society (Antze and Lambek 1996; Forty 1999; Jedrej 2002). The degree or intensity of memory, correlates with internal and external actions, including the tangible and intangible objects that surround the recording of experiences (Jones 2003). Through the displacement of experiences, histories are generated and recorded in the human memory (Ingold 2000) over space and time.

Time is a vector that crosses space and relates it to the sensation of movement. The perception of the time is a tool that connects experiences and actions that develop and are displaced through space. Time is experienced individually and socially. For individuals, time is marked or experienced by physical and biological processes of the body (Urry 2000a, b) such as walking, breathing, heart rate, and aging. Time is experienced among individuals and social groups, through the recurrence and observation of natural phenomena such as cycles of the moon and the sun, day and night, climate, seasons, or tides. Socially, time is constructed by collective actions such as rituals, wars, work, and celebrations (Evans-Pritchard 1940:492; Herbert 1891; Van Gennep 1960). From this perspective, time is the result of social cooperation and communal practices (Durkheim 1995; Urry 2000a). In other words, time is physically, environmentally, and socially constructed and experienced in space.

Space Consciousness and Functions

Space is the matrix where human experiences are practiced, recorded (Rappaport 1985:35), categorized(Bourdieu 1991:232-237), enacted (Merleau-Ponty 1962), and reconstructed (Bell 1992; Bourdieu 1977). It is the place where individuals and societies find meaning (Urry 2000b). Individuals and social groups create categories of space (Durkheim 1995). Space is only understood when individuals or societies mark points of reference or create categories to organize it (Foucault 1970:70; 1980; Viswanathan 2005). In both individuals and groups, boundaries are not only concrete points in space, but also symbols with cultural and ethnic meaning (Jedrej 2002; Simmel 1950).

Because social spaces are produced and reproduced over time, space is not a neutral agent but an active place for generating ideologies, frictions, social and cultural contradictions (Barthes 1997:166; Heidegger 1993:347-363; Quantrill 1987:3-30; Rappaport 1985:35; Sahlins 1981:14-17). These cultural phenomena are generated by the creation and imposition of limits in space, and by ideas of belonging and identity (Lefebvre 1991:223). Lefebvre (1991:222-225) posits that a number of categories of space can be considered, including: 1) spatial practices, from individual routines to group structuring of the geographic terrain, that are manifested in the landscape, 2) representations of space through the knowledge of techniques and planning of space, and 3) experiences of space that are individually and collectively symbolized. It is through these social phenomena that human beings intersect within the matrix of space. The division or boundaries of experiences and memory in space stimulates its use in creating divisions between the self and others (Lefebvre 1991:224). In this context, human beings intersect and identify in the spatial matrix, stimulating values of identity and belonging, which can be read as a cultural text.

Space as Cultural Text

Space as cultural text is a concept derived from the hermeneutic method, in which natural landscapes, paintings, maps, buildings, and social institutions are read like texts (Duncan 1994:40-102). Space is divided in significant and memorable ways by human beings, generating reciprocal relations among them and their landscape (Ingold 2000:230). This reciprocity is evident in three levels: the classification and acceptance of space, the control of space, and the "sense of communication of the place".

There is a discursive relationship between human beings and their artificial and natural landscape. The meanings of this communication and the anthropogenic impact on the landscapes transform the space into texts filled with cultural meanings and behaviors (Agnew 1994a:620; cf Geertz 1973:127; Geertz 1988:84). Individual, social, and natural space is not only a series of juxtaposed points, but a series of juxtaposed histories that say something about the movement of human beings through space; it is a journal of human experiences (Ingold 2000:238) to be read.

Space as Scale Marker

Infinite space can be divided quantitatively and qualitatively resulting in several socially constructed subunits. Qualitatively, the basic subunits of space are constructed by kinship or family units. For human beings, a home or a household is the minimum unit of space where daily practices (Bourdieu 1977:89-95), solidarity (Durkheim 1995), the fulfilling of biological needs and social reproduction are carried out (Lefebvre 1991:232). The juxtaposition and extension of these minimum units gives rise to the origin of a new segment of social space that is the broader community, town, or village.

Social space is constructed and delimited not only for physical reasons,

but also for cooperative group motives (e.g., political, economic, administrative, defense and religion) (Schortman 1989). Social spaces such as , villages, and cities, are constructed through actions that give support and stability to the social group's common interests (cf Agnew 1994a). At this level, social space is constructed and reconstructed through symbolic structures that motivate group cooperation and protect social practices (Sullivan 1988:146-147).

At a broader level, space is negotiated and organized by social groups. These socially constructed spaces are not homogenous but embody particular social meanings about identity, ethnicity, and culture that are group specific (Eco 1997:182-185; Leach 1997:xix-xx). All of these interact as nodes, defined by their own boundaries (Van Gennep 1960:16-19), and are linked through a web of tolerance, negotiation, and conflict (Geertz 1973:90). At this level, space is a network through which individual and group relationships flow in the territorial landscape.

At its greatest extent, the territorial landscape is constructed through the collective actions of multiple groups. It is a network where memory, experience, and relations between internal and external worlds are conceptualized and concretized (Ingold 2000). Within territorial spaces, human beings exercise, control, and develop strategies for individual and social survival within the group (Agnew 1994b). They are the physical matrix where the concepts of present time give meaning to existence and spaces that reinforce memories of the past, and project them into the future (Battaglia 1990). Territorial spaces are shaped by a social and natural topography and in turn, they are the spaces where cultural and ethnical identities are created.

Space as Territorial Identity

Identity is a symbolic set of meanings with polysemic characteristics

(Emberling 1997). It is an unbounded movable phenomenon that is perpetuated by human acts through the construction and reconstruction of symbolic objects (Leach 1997) and languages over time through space (cf Emberling 1997; Geertz 1973; Turner 1967). Concepts of identity generate social links that can be simple or complex, and bring groups together or divide them across physical boundaries. Individuals or groups can simultaneously identify themselves with multiple cultural components in the society to which they belong, or wish to belong. Socially, identity is a cooperative construction that creates group solidarity or conflict, through time and space.

Ethnic identity can be considered on three levels: 1) ethnic identification through belief in a common ancestry (seeVan den Berghe 1981), 2) ethnicity as an instrument to exert power and domination of a group to which individuals belong (see Smith 1987), and 3) ethnicity to create organic cohesion of groups, which have a common historical origin in the past (see Barth 1969). Concretely, ethnic belonging is a phenomenon created and manipulated socially by individuals (Van den Berghe 1981) that reinforce their own social limits (Kobylinski 1989; Shennan 1989). This generates "categories of ascription and identification by the actors themselves" (Barth 1969:10).

Ethnicity is the basic form of generating limits of identity (Barth 1969:15). These limits are reinforced through experiences lived in individual and social spaces (Sokolovskii and Tishkov 2002). Later, these are remembered imaginatively through markers of ethnic identity, which can be intangible (e.g., language, ideology, and symbolic acts of group) and tangible (e.g., architecture, art, and configuration of space) (Emberling 1997).

Summary

Societies perform activities, construct natural and social environments, and categorize their world into spaces that shape the social landscape. Places and territories embody the particular beliefs and structures of society, and act as intertextual places, where cultural patterns are readable and materialized through their social practices and the establishment of their social institutions.

These theoretical concepts are the foundation for understanding the archaeological remains left in the spaces of the Nahua-Pipil settlements of the south Pacific coast. However, linking theory to methods is always a topic of concern. The following chapter describes the methods and techniques used in this investigation, offering theoretical connections when appropriate.

CHAPTER III.

METHODOLOGY

Territories embody the particular beliefs and structures of societies (Agnew 1994a:620; Stolz 2002). Territorial spaces also act as "intertextual" places (Duncan 1990:621). This means that previous cultural patterns are readable in new physical locations because they are reconstructed where people live. Social practices and social institutions that are arranged according to such cultural patterns are identifiable in archaeological remains. The methodology and tools described in this chapter are oriented toward the extraction and analysis of data along these lines of thought. Field mapping, field data collection, laboratory data (e.g., the creation of thematic analysis maps using different software tools), ethnohistoric documents (such as indigenous and Spanish accounts), maps and documents recording linguistic distribution, and archeological data were included in the analysis and incorporated into the methodological framework.

Fieldwork Strategies

The data from seven settlements along the central Pacific coast were gathered in 2003 - 2004 during consecutive field seasons. Most of the fieldwork was dedicated to surveying the land and mapping the Late Postclassic sites of the central Pacific coast region of Guatemala. Most of these sites are between 20 and 200 meters above sea level, in an area approximately 3500 km^2. The existing network of farm roads facilitated movement through the areas where

the sites are located. The sites that were surveyed were reached by car and by walking along farm roads.

Late Postclassic settlements in the South Pacific Coast corridor are characterized by low mounds and relatively flat terrain. A number scholars investigating Late Postclassic settlement patterns have recognized that such low architectonic constructions consist primarily of wattle-and-daub (see Bove, *et al.* 2004; Polo Sifontes 1989; Shook 1965; Voorhies and Gasco 2004). Today, the shape of the mounds is difficult to distinguish from the land's surface. Agricultural damage also contributes to the difficulty in distinguishing mounds from natural landforms. The reduction of original mound height and increased artifact scatter areas make estimations of the original mound dimensions difficult to determine. Due to these factors, a spatial survey mapping technique was implemented and carried out by the author and two crewmembers.

Field Mapping Procedures

The terrain was initially surveyed to identify the composition of archaeological features representative of Nahua-Pipil sites, avoiding the disturbances made by agricultural activities. Test pits were then dug using a posthole digger to establish whether the low mound-like features represented occupation zones. Prior to formal mapping, sketch-maps were drawn.

As mentioned, the shapes of earthen mounds were difficult to determine. For this reason, the traditional Mesoamerica archeological prismatic shape convention was used to indicate mounds in the sketch maps (Carr and Hazard 1961; Sabloff and Tourtellot 1991; Tourtellot III 1988; Willey, *et al.* 1965). In this convention, rectangular prismatic shapes are used to delimit mounds without reconstructing their actual shape but offers nearest dimensional estimates (Estrada Belli 1998).

The topographic mapping was completed using Total Station (Pulse Total Station GPT-3000 series). In traditional methods of survey, triangulated land measurements are obtained by using a transit, tape measures and surveying rods, which necessitates post-processing of data using trigonometric calculations and increases the time required for data processing as well as the margin of error. The use of Total Station reduced the amount of time needed for obtaining land measurements in the field, data calculation time, and lab processing (Bradley 2006a).

One of the main advantages of Total Station technology is that it produces real-time results (Bradley 2006a:35). Combined with data collectors (such as the TDS Recon used in this project) and data collection software (Survey Pro), the Total Station gave real-time results during the survey of the terrain and permitted immediate correction in the field. This was not a complete substitute for traditional field methods that included field notes and sketches, but a method by which to achieve the desired results. Field survey and data collection procedures are similar despite the technology used (Backhouse 2006:52; Bradley 2006a:35).

In order to complete the regional study, an efficient database to integrate diverse forms of spatial and artifact data was necessary. The use of Global Positioning Systems (GPS) technology accomplished this goal[6]. This satellite-based technology is an aid to data gathering, storage, retrieval and analysis (for a detailed GPS methodology see Morandi, *et al.* 2003). In this investigation, a GPS unit (Garmin GPS II Plus) was used to collect digital data and to map features and areas that were not surveyed with a Total Station. GPS was also used to synchronize the Total Station benchmark with the GPS geographic coordinates. This procedure established all points in the grid relative to one

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6 After the Gulf War in 1991, GPS technology has been widely used by archaeologists to register the geographic location (e.g., latitude, and longitude coordinates, as well the sea level altitude) of any archaeological feature from any point on earth (Peters 2001).

geographic coordinate and avoided later adjustments of relative coordinates and degree conversions.

The Total Station benchmark was set up according to the bearing of magnetic north and calibrated with the other cardinal points using a compass. After establishing the benchmark, the survey crew set up a grid of the mapping area by taking general measurements of the land and identifying its general topography. The crew then surveyed for specific mound details in order to differentiate between the natural shape of the land, and land modified by more recent human activities (e.g., the building of roads or plowing of fields). Communication between the survey technician and rodmen over longer distances was maintained using walkie-talkies. Field notes and sketches were recorded to supplement the field data and as a back-up measure to ensure that no data were lost. These were also used for corroboration, digital processing, and laboratory analysis.

The survey and field mapping data were transferred from the data collector and field notes to a desktop PC for storage and their incorporation into the Pipil Project digital geodatabase[7]. This geodatabase includes isolines[8] from 1:50,000 scale topographic maps, landform features, soil types, as well as aerial photographs from the Pacific coast of Guatemala that were digitized and rectified by Ryan S. Arp of Brandeis University.

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7 It is a geographic data set of features recorded as points, lines, areas, pixels, grid cells, and TINs (triangulated irregular network) of the landforms. It also includes their quantitative and qualitative attributes (Zeiler and Environmental Systems Research Institute Redlands California 1999:64).

8 The prefix "iso-" means "equal". In a map an isoline is continuous line joining points of the same value. Examples would be equal altitude (contour lines), temperature (isotherms), barometric pressure (isobars), wind speed (isotachs), wind direction (isogon), wind shear (isoshear), etc. The Isoline is used to interpret data on thematic maps (Cole 2003:543).

Laboratory Strategies

The adoption of methods and techniques from other disciplines is a part of the archaeological tradition (Anaya Hernandez 1999:3). Due to the spatial nature of the archaeological data, methods and procedures used in this investigation were derived from the Earth Science of Geomatics (or Geospatial Technology) which is a discipline focused on capturing, analyzing, and retrieving geo-referenced data. Techniques from Geomatics used for the creation of analyzable maps from field data included the use of remote-sensing imagery (e.g., satellite imaging and aerial photography), and Geographic Information Systems (GIS) technology. The combination of these techniques based on computer assisted technology made it possible for existing artifacts (e.g., archaeological ceramics or architecture) to be referenced according to their specific geographic location within the larger geodetic matrix (Burrough and McDonnell 1998:11). The spatial location of objects was integrated, correlated, and analyzed in combination with other objects or variables in the spatial domain.

Currently, the most common platform in computer technology for establishing these correlations is the Geographic Information Systems (GIS), first developed for map-based computer technology programs. GIS technology has been used in the archaeological world for nearly four decades. In the 1970s, this technology was first used for displaying quantified data using computer graphics, producing surface models of artifact distributions, and designing other graphic-output statistics (Bove 1981; Kvamme 1995; Redman and Watson 1970). GIS is widely used in settlement pattern studies. The archaeological application of GIS integrates digitally-mapped data, statistical procedures of spatial analysis, and locational theory (Hodder and Orton 1976; Shennan 1988). However, the most common uses of GIS in archaeology have been the introduction of predictive

location models, statistical association of environmental variables and prehistoric site location, and the creation of digital databases that contained large and complex regional archaeological records (Kvamme 1990; Roorda and R 1992).

The strength of GIS is its capacity to combine, separate, and retrieve spatial information (Longley 2005). GIS is supplemented by standard statistical packages (e.g., SPSS or Systat) that help to simplify complex statistical analyses and represent these on graphs that can be incorporated into the GIS map analysis. This cartographic capability is helpful for encoding archaeological and environmental data that can be easily, quickly, and simultaneously displayed on thematic maps, and used as an analytical tool for data recognition patterns.

Settlement Pattern

Since its first extensive application by Gordon R. Willey (Willey 1953) and colleagues in the Virú Valley of Perú during the 1940's settlement pattern analyses have been adopted in archaeological studies. Settlement pattern studies examine all aspects of regions or areas rather than focusing on individual sites. The strategies used by groups for taking advantage of the available resources in their environments are given careful consideration. In recent decades, the settlement pattern is conceptualized as the interaction among temporary or permanent sites and their landscape (Bender, *et al.* 2007; Bradley 2006b; Rossignol and Wandsnider 1992; Tilley 1994).

Regional settlement pattern studies take the spaces between the sites into consideration. These spaces are seen as part of the interrelationship between humans and the environment (e.g., resource availability, carrying capacity, human adaptation, etc.). This approach pays attention to human land-use on different geographic scales over time (Adams 1977; Flannery 1976). The major goal of this type of holistic approach is to interpret human strategies for

land modification. The use of land by groups for various social, economic or political reasons can be seen to embody the complex cultural histories that are embedded within the landscape through both time and space (see discussion in Chapter 2).

Site Plan

Central coastal settlements of the Nahua-Pipil are identified based on the location of mounds or provenience of artifact scatters observed during the survey. These are comprised of four basic features: mounds, pyramids, reservoirs, and the spaces in between. The term mound is used as general term to describe earthen works (Estrada Belli 1998:63). A single mound is considered a residential home or other activity area. A pyramid is a steep sided conical mound of above 2 m in height (Estrada Belli 1998:63) that is usually comprised of platforms of diminishing size that have been superimposed on one another (Tourtellot III 1982:200). Culturally, a pyramid is interpreted as a specific building where performance of socially symbolic status or communal activities took place). Reservoirs are large artificial oval ground depressions used for water storage. The spaces that these components create result from the clustering of these features through human modification of the settlement plan.

The clustering and combining of these elements in a configured space is interpreted as a settlement cluster. These clusters are identified according to the number of mounds, as well as the size and spatial extent of the clusters. The number of clusters determines the hierarchy of settlements. The criterion for delimiting a settlement (site) is the space between nucleated clusters that are more than 1 kilometer apart. This delimitation is arbitrary and considers the possibility of mounds that were not identified but likely exist beneath the surface.

Following this criterion the Nahua-Pipil settlements were ranked 1-3 based on the surface area of the constructed mounds and spaces (plazas).

Based on the physical units outlined above, the settlements were analyzed according their relationships within the physiographic natural elements. These included their distance from landform features (e.g., streams, ridges, or lagoons, and slope of the terrain), soil types, and altitudinal zones, which were evaluated to establish the natural and resource domain of each site. The physical and natural composition of the settlements was analyzed according to a three-tiered ranking system. These hierarchical units were used to correlate the settlement composition into analytical cultural categories. The cultural category defined in this thesis is the *altepetl* system, which is characteristic of the ethnic sociopolitical organization of the Nahua culture (Lockhart 1992).

The small-ranking units of space were observed based on comparisons with *chinamitl* or *tlaxilacalli* unit(s). The *chinamitl* is the basic household unit(s) in which a single or extended Nahua-Pipil family is clustered within the *altepetl* system (Bove, *et al.* 2004). These small-scale units comprise a single mound or group of mounds that represent a single or extended family.

Several *chinamitl* or *tlaxilacalli* units comprise the larger unit known as the *calpul*. The *calpui* is a larger compositional unit that consists of several family (or *chinamitl*) units that are governed by a *calpul* leader. In the Nahua Altepetl system, these units had a specific economic function. The *calpul* corresponds to the mid-ranking unit of analysis, where variables such as site plan, extent, and geographic location were evaluated in order to infer potential associations between the sites and their economical function as a *calpul*.

The third level of analysis examined the combined sites in the landscape and tests their relationship to the *altepetl* structure or Nahua “ethnic state”. This level of analysis includes all characteristics and geographic domains of each

potential *calpul* and smaller *chinamitl*. The goal was to understand the whole structural domain of the Nahua-Pipil organization in the central Pacific coast region.

In sum by establishing these analytical units, it was possible to isolate the measurable settlement plan and its characteristics and correlate evidence within the cultural parameters of the *Altepetl* system. This correlation displayed the way in which the Nahua-Pipil settlement pattern embodied their cultural socio-political structure known as *altepetl* and also the ways in which the Nahua-Pipil made use and took advantage of their territorial space and the environmental resources.

<u>Ceramic</u>

Ceramic analysis consisted of mapping the occurrence of various ceramic groups and observing their statistical behaviors in the geographic domain of the central Pacific coast region[9]. Statistical measures such as frequency and density from the raw ceramic sample were used to generate isoline maps. This permitted the incorporation of information in a thematic map format for observing the geographic distribution and incidences of ceramics within and throughout the Nahua-Pipil sites.

The frequency highlights the quantity of artifacts represented at each site. On the thematic maps, the frequency was plotted using a circle at the X-Y coordinate that corresponds to each site's polygonal centroid. The density was then obtained by dividing the frequency by the surface area of 1km^2. Density is represented by contour lines and plotted using X-Y-Z coordinates.

Large-scale visualization obscured many details and overlapping data (see Mackaness 1996:58-59). In order to overcome this problem, statistical graphs (bars and tables) were juxtaposed on the base map views to give a detailed view

9 The analysis of ceramic artifacts was completed by José Vicente Genoves, the ceramist of the Pipil Project.

(or lower scale perspective) of the ceramic artifact frequencies, a zoom into the large-scale thematic map visualization (see Monmonier 1996). For visualization of large-scale thematic maps, it was necessarily to target ceramic group samples within a common geographic coordinate. The centroid coordinate of the map scale 1:50,000 was the common coordinate for the samples circumscribed in the same square kilometer. The MS Access database program was used for storage and generating queries from the ceramic database. Descriptive statistical analysis and exploration of the data was conducted using Microsoft Excel. The frequency, mean, and density plotting were made in Golden Surfer8 and ArcMap software programs.

Ethnohistoric Accounts

Indigenous and Spanish documents represent different points of view. With these different perspectives, it is possible to cross-reference these sources of information with other lines of data, such as that obtained through anthropological research and using the direct historical approach methodology. This has been demonstrated by several scholars who have used these documents in conjunction with other lines of archaeological, linguistic, historical, and ethnographic data through diverse areas of Mesoamerica (see Bernal 1949; Carmack 1973, 1981; Caso 1932; Chase 1981, 1985; Chinchilla Mazariegos 1996, 1998; Fowler 1989a; Freidel and Sabloff 1984; Marcus and Flannerry 1994; Polo Sifontes 1989; Rice, *et al.* 1993; Thompson 1948; Van Akkeren 2004b).

Ethnohistoric accounts contain a variety of information about the Nahua-Pipil, including their language and social practices that were recorded at or near the time of Spanish conquest, these data were used to better understand Nahua-Pipil culture. These secondary lines of data were useful in the evaluation and

characterization of the Nahua-Pipil archaeological assemblage in the central Pacific coast region.

Indigenous documents were useful for reconstructing the history of the native peoples and their political and geographic domains. In general, indigenous or native documents are important because they are written from the viewpoints of the indigenous writers who highlighted their own ethnic identities and historic lineages (Rice 2004).

Spanish chronicles and Colonial documents were important inclusions because they reflect direct contact with indigenous peoples and contain much information about them. The Spanish were the first western witnesses of cultural behaviors in the new world. The use of their documents, however, requires caution because their interpretations were shaped by sixteenth-century European world views and for this reason contain a certain amount of bias.

These lines of ethnohistoric data were compared and contrasted with the archaeological evidence of the Nahua-Pipil sites.

Equipment and Software

Multiple software packages were used in the digital data management, analysis, and creation of thematic maps during post-processing of the combined archaeological, cartographic, and topographic data. The techniques, procedures, and data combination were derived from "spatial computation" or "Geocomputation", which is "the eclectic application of computational methods and techniques… to portray spatial properties to explain geographical phenomena, and to solve geographical problems" (Couclelis 1998:17; cf O'Sullivan and Unwin 2003:361). These techniques have a useful archaeological application for data analysis. Appendix A (p #) presents a description about

the software used during the data analysis and the thematic maps creation and design.

Thematic Maps

All maps, including thematic maps, are abstractions or simplifications of the "real world" (Cuff and Mattson 1982:2; Montello 2002:283) or abstracted models of reality (Longley and Batty 1996:76). Thematic maps are complex multiple-themed maps that encode a great diversity of information (Wheatley and Gillings 2002:25) and act as filters that interface with the spatial information intended for scientific or plan-management use (Zeiler and Environmental Systems Research Institute Redlands California 1999:24).

Due to the flexible nature of thematic maps, both qualitative and quantitative data can be juxtaposed within the same visual space by incorporating auxiliary graphs, diagrams, tables, sketches, satellite imagery, as well as symbols that make them more reader-friendly (see Cuff and Mattson 1982:11-46; Mersey 1996). In thematic maps, the subject matter is more relevant than the features of the base map (e.g., streams, roads, political boundaries or other land forms). Thematic maps highlight topics that are generally less tangible or more difficult to detect in the real world such as averages or geographic distributions of archaeological features or population density (Cuff and Mattson 1982:2; Montello 2002:285). In short, the purpose of thematic maps is to "stimulate and suggest" knowledge (Montello 2002:292) about the phenomena being represented by symbolic features.

Because symbols are critical for displaying and visualizing quantitative and qualitative data, the map symbols (e.g., circles, squares, isolines, polygons)

and thematic maps - including the creation of Isarithmic[10], Choropleth[11], and Dasymetric[12] thematic maps - were derived from the symbol rules recommended by Cuff and Mattson (1982:15-59). Using this convention, landforms and archaeological features (e.g., rivers, mangrove, altitudinal zones, soils, mounds, artifact, etc.) are represented by points, multipoints, lines, polylines, and polygons. Each feature was then labeled according to the object or phenomena that it represents, qualitatively or quantitatively.

The Nahua-Pipil maps in this thesis were generated in AutoCad® and ArcMap® software, using both raster[13] and vector[14] file-formats. The final thematic maps were combined with charts, graphs, and different shape symbols. These symbols were used for depicting the association between archeological and geographical phenomena (e.g., artifact frequency, density, site plan form, settlements distribution, hydrology, orography, soils, and ecological and altitudinal zone (see Figure 2).

The Universal Transverse Mercator (UTM) was the standard geographic projection used to maintain integrity between land management survey maps, the Pipil Project geodatabase, GPS coordinates, and Total Station digital data.

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10 Isarithmic maps are thematic maps used for displaying continuous data (e.g., air temperature, rainfall pollution concentration) using isolines that help to reconstruct or represent a picture of an area where the phenomena occurred even though the data used are fragmentary (Cuff and Mattson 1982:15).

11 The name of the Choropleth map is derived from the Greek choros, for place, and plethos, for magnitude. It is commonly used for displaying density or ratio data (Cuff and Mattson 1982:36).

12 In Dasymetric maps, the differences between pairs of data (e.g., average and density) that are lower and higher in the geographic space are represented (Cuff and Mattson 1982:40).

13 Raster format is the basic unit of an image displayed on a digital device (e.g., computer monitor, television screen, or printer) that generally is arranged in rows and columns and represented a combination of brightness and color values of an image (Wade and Sommer 2006:175).

14 Vector is a digital format to represent points or lines connecting points (areas enclosed by Lines) using their x, y, coordinates, (Wade and Sommer 2006:224).

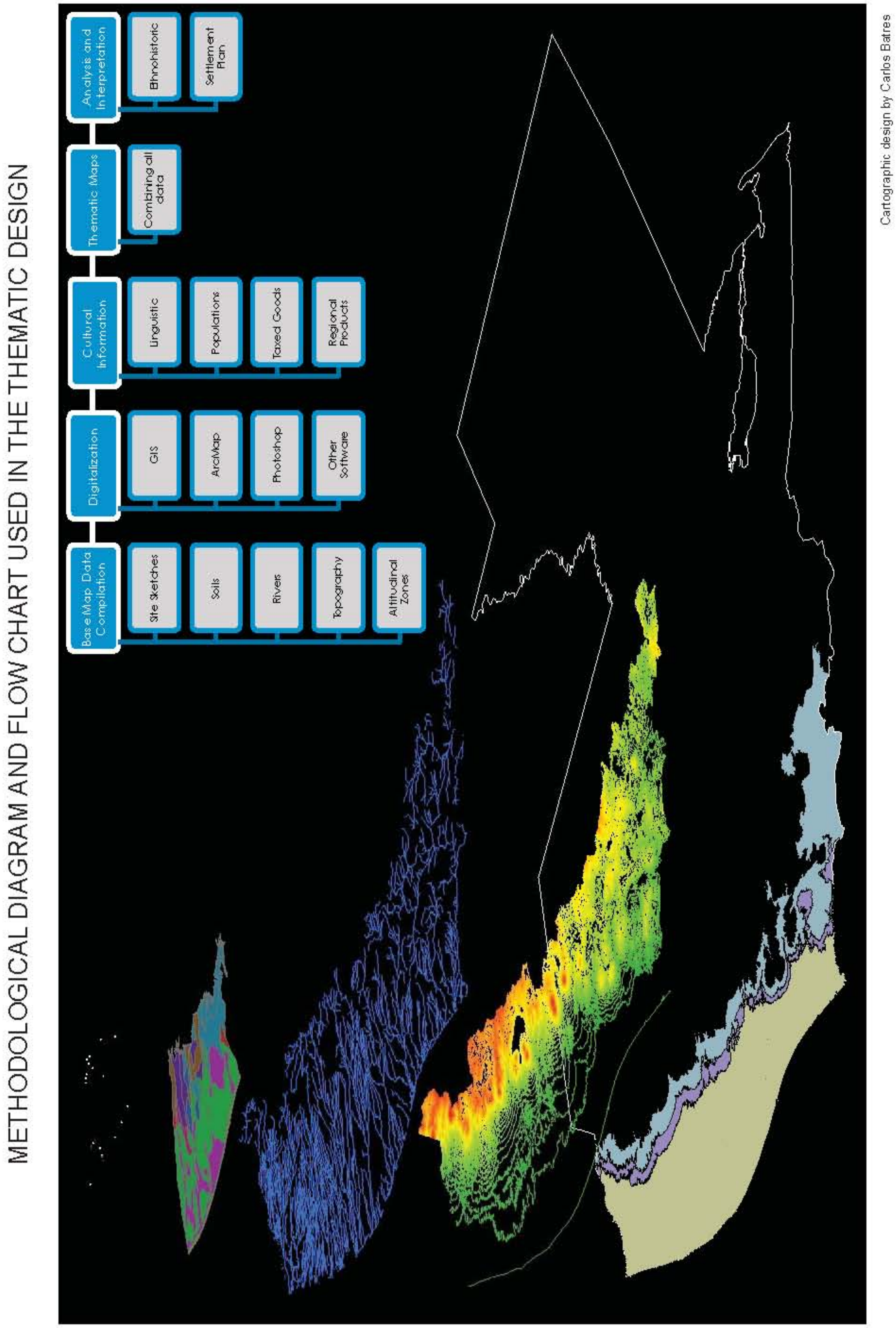

Figure 2: Methodological Diagram Used for Creating the Thematic Maps

Summary

The equipment for data recording and data analysis (e.g., software, GPS unit, Total Station) were chosen as tools and techniques to digitally manage the field and lab data. The objective of the above mentioned methodologies was to capture, retrieve, and analyze systematically the Late Postclassic Nahua-Pipil data and settlements through the central Pacific landscape. The settlements were classified according to a three-part ranking system for a systematic evaluation of the sociopolitical and cultural organization of this ethnic groups' occupation of the south Pacific coast in Guatemala.

During the analysis of the data, different kinds of tables, charts, and maps were produced from different software packages. The resulting thematic maps were used as analytical tools to complete the Nahua-Pipil analysis. In total, over 150 images were produced from which, 54 thematic maps were generated for analysis and comprehensive data representation.

The thematic maps that characterize the Nahua-Pipil sites of Carolina, Caulotes, Costa Rica, El Jute, Esperanza, Gomera, Las Playas, Nuevo Mundo, Pajuil, and Yolanda were the primary lines of data used in this thesis (see Figures 3 to 12). Ultimately, these lines of evidence were compared to secondary data from ethnohistoric and linguistic sources and data from previous archaeological investigations in order to explore and analyze the Nahua-Pipil of the south Pacific coast of Guatemala within the interpretive framework that consisted of site-settlement plan and cultural landscape. The following chapter begins an exploration of these interlinking data by analyzing the ethnohistoric accounts on the Nahua-Pipils.

Figure 3: Carolina Site

Figure 4: Caulote Site

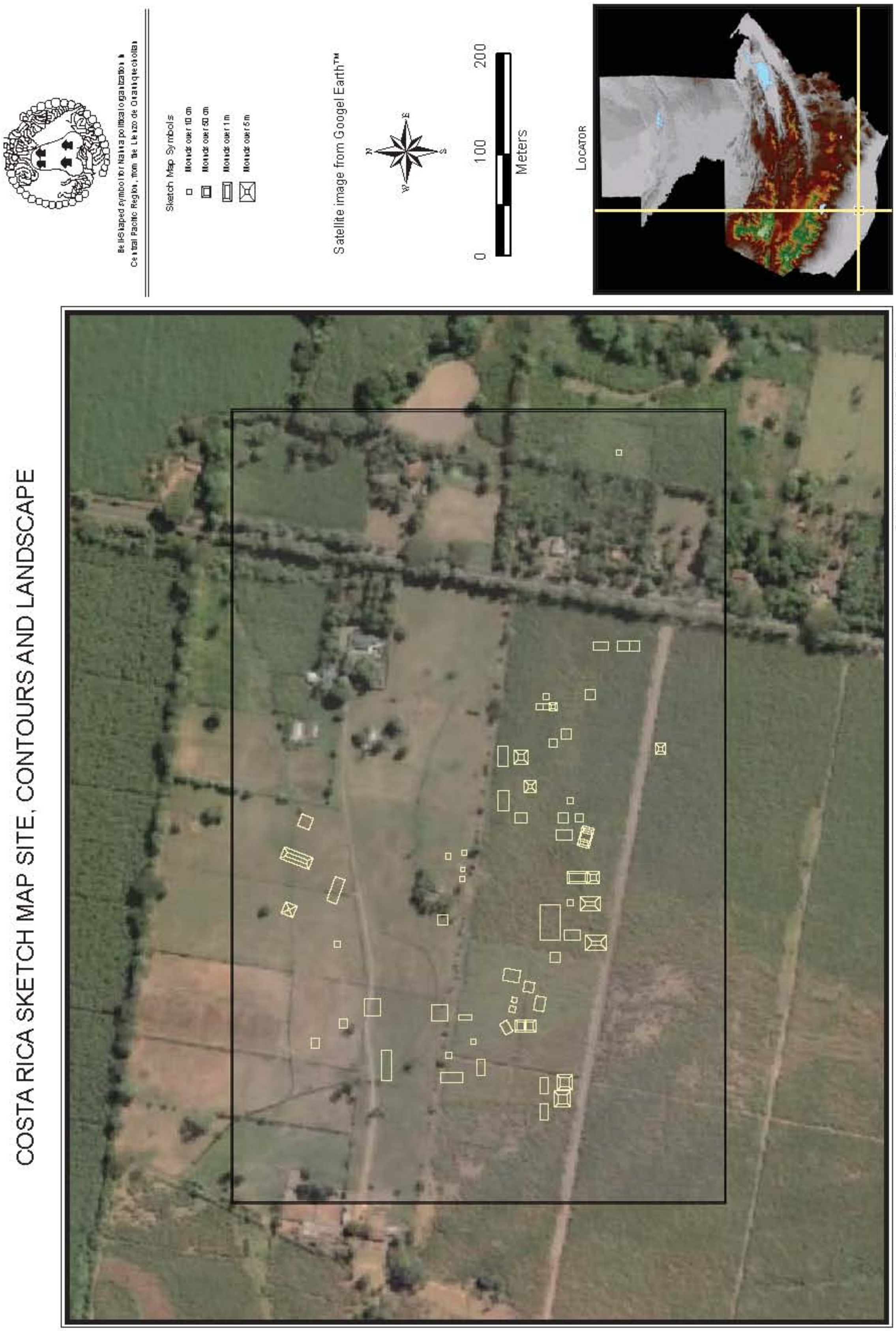

Figure 5: Costa Rica Site

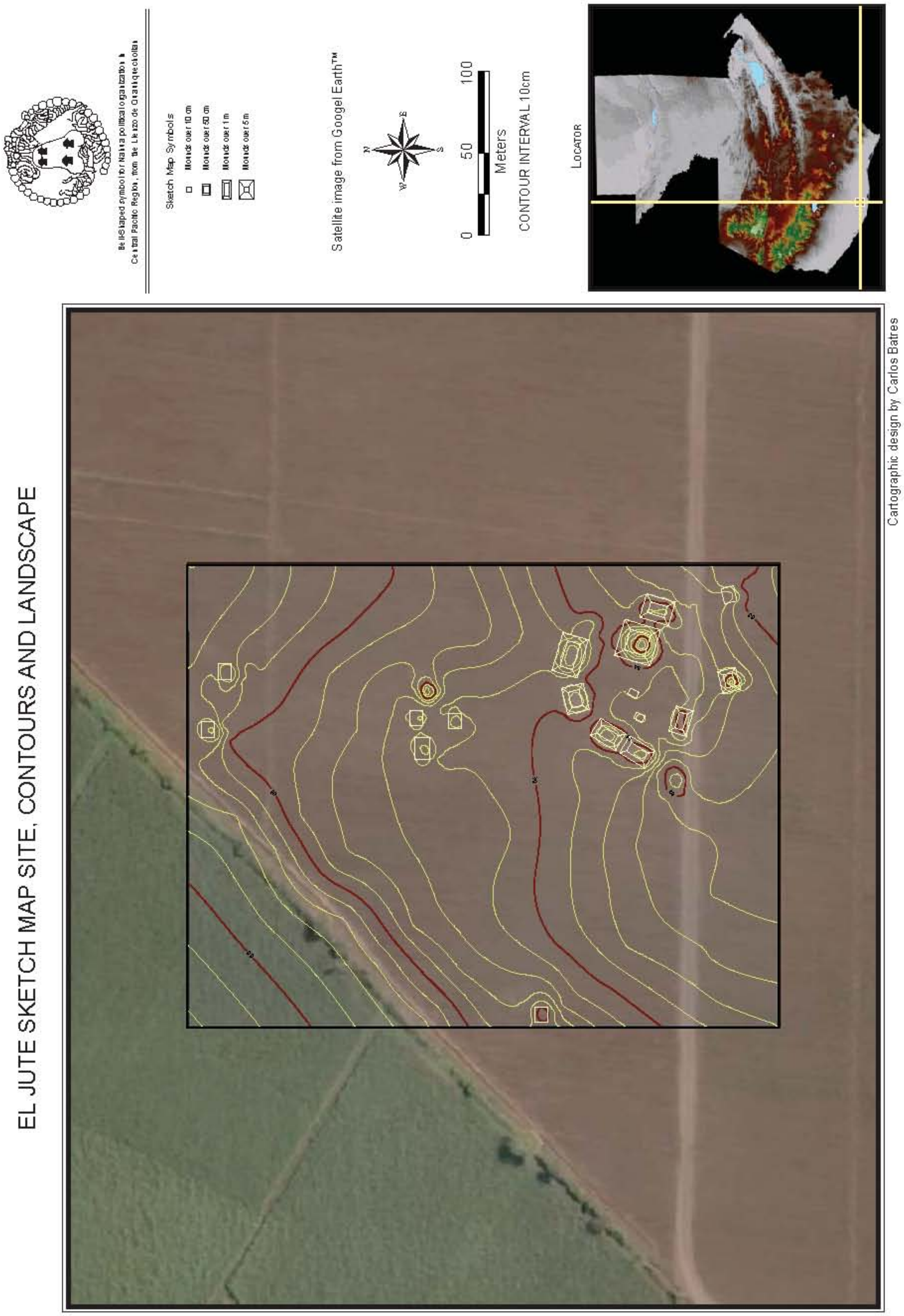

Figure 6: El Jute Site

Figure 7: Esperanza Site

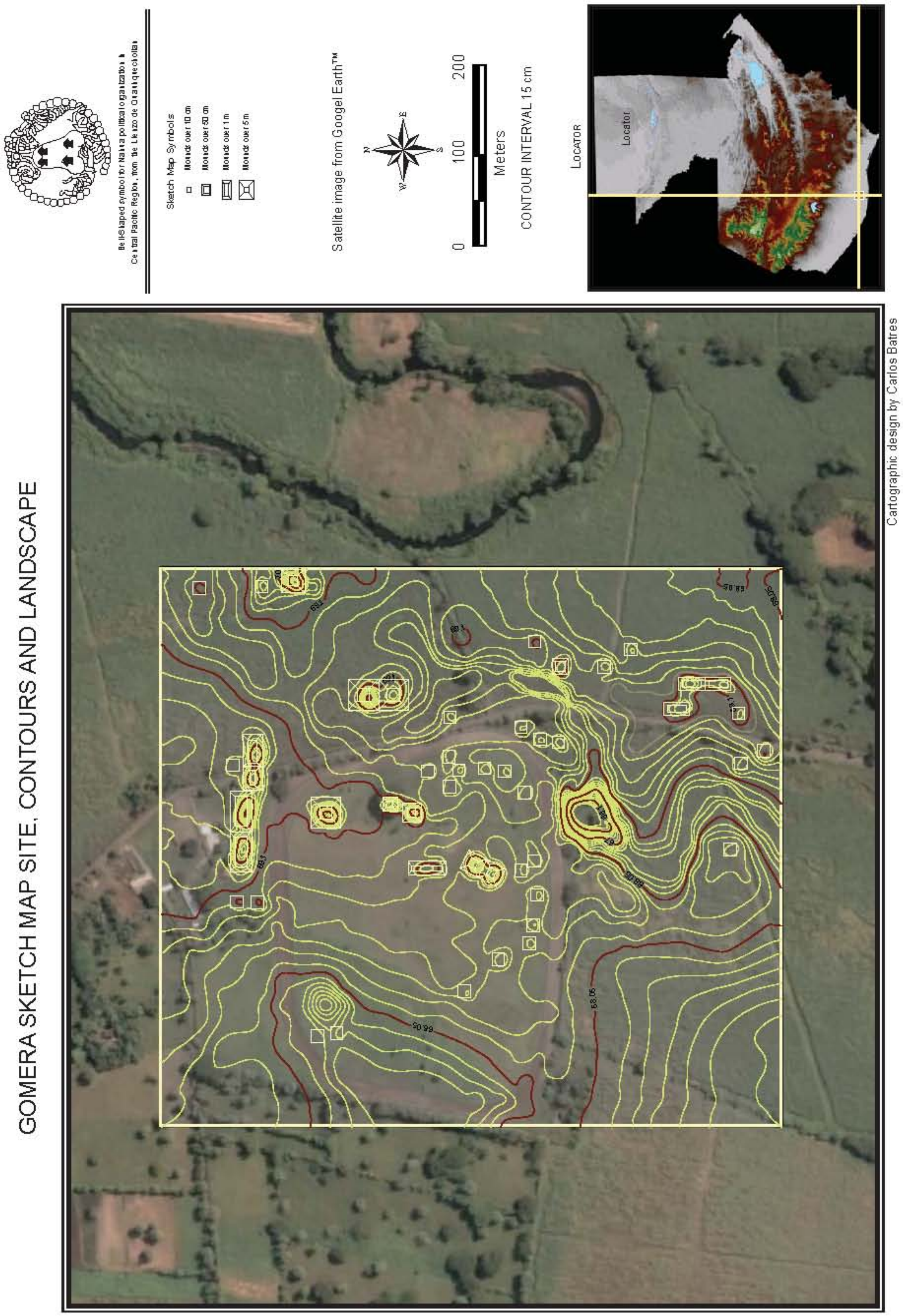

Figure 8: Gomera Site

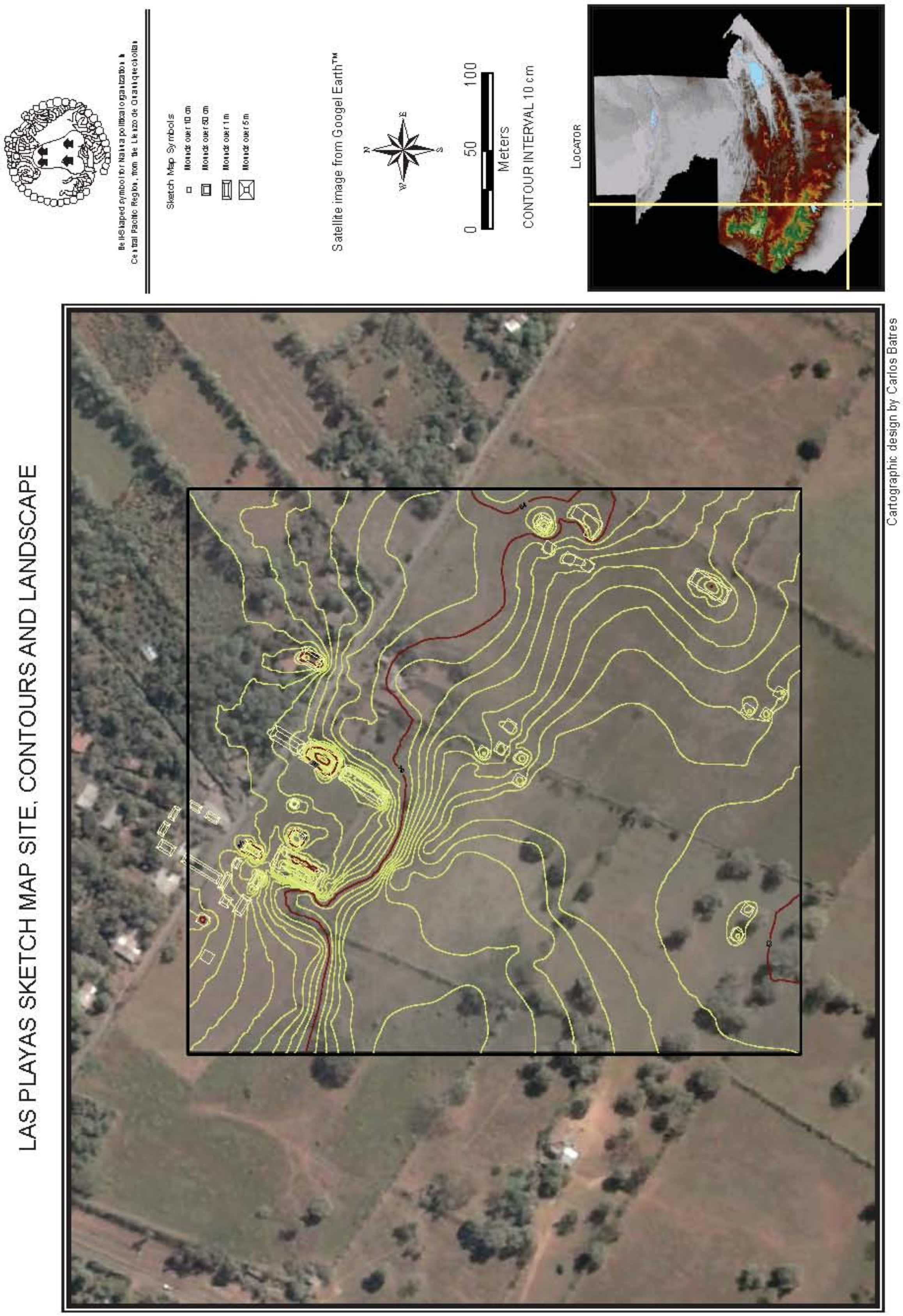

Figure 9: Las Playas Site

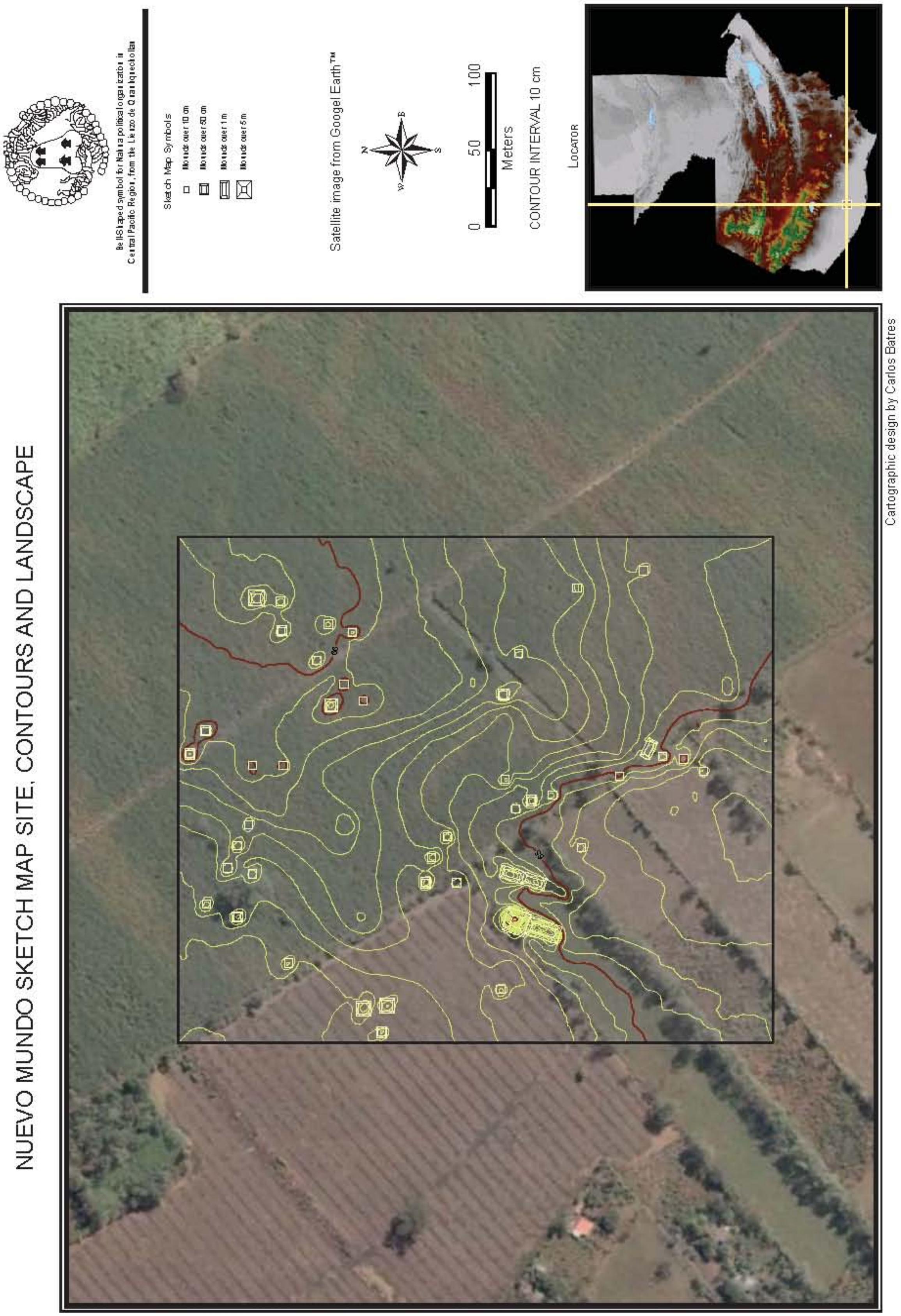

Figure 10: Nuevo Mundo Site

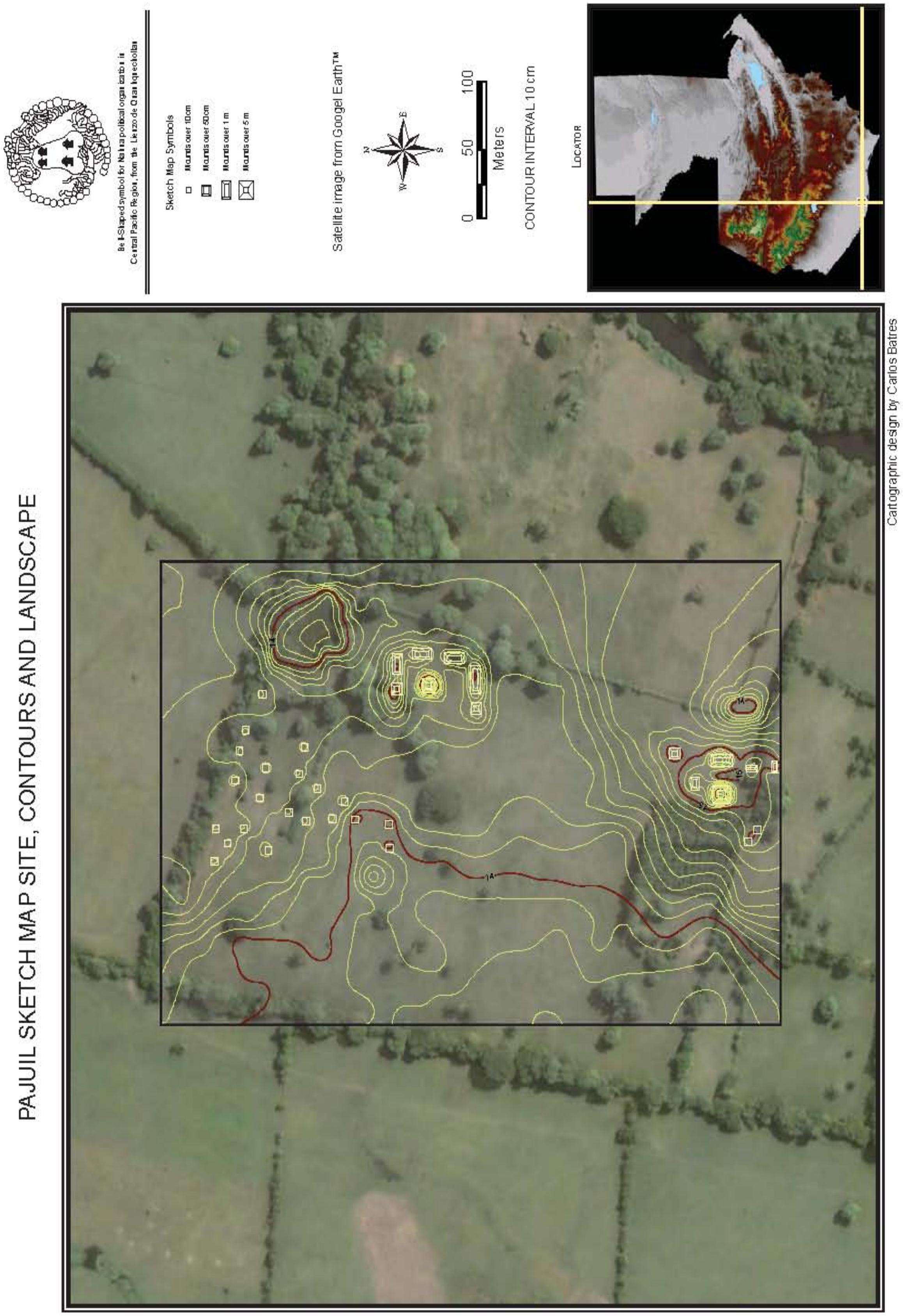

Figure 11: Pajuil Site

Figure 12: Yolanda Site

CHAPTER IV.
ETHNOHISTORICAL ACCOUNTS

Indigenous and Spanish records, dating to the early conquest period, recorded comprehensive data on New World cultures. Among these, many documents recorded the presence of the Nahua people and Nahua-Pipil groups in southern Mesoamerica. While some indigenous and Spanish chroniclers, historians and priests collected stories from the southern Mesoamerican natives, others recorded taxes and tributes paid to the Spanish crown (see discussion in Chapter 5). The present chapter touches upon various aspects of the Nahua-Pipil culture, citing only the most accessible ethnohistoric records. As the present chapter illustrates, numerous accounts make mention of various aspects of this ethnical group in Guatemalan South Pacific coast region.

Nahua Migration to Southern Mesoamerica

Ethnohistorical documents written between the sixteenth and seventeenth-centuries describe several Nahua settlements (see Figure 13)and suggest that the arrival of the this population to Central America, including Guatemala, was the result of a series of environmental and sociopolitical events that motivated their movement out of central Mexico (Benavente Motolinía 1903; Ixtlilxochitl 1891; Oviedo y Valdés 1945; Torquemada 1943). In *Historia general y natural de las Indias Occidentales*, the official chronicler of the *Indias* (New World), Gonzalo Fernandez Oviedo y Valdés (1945), included notes on interviews with

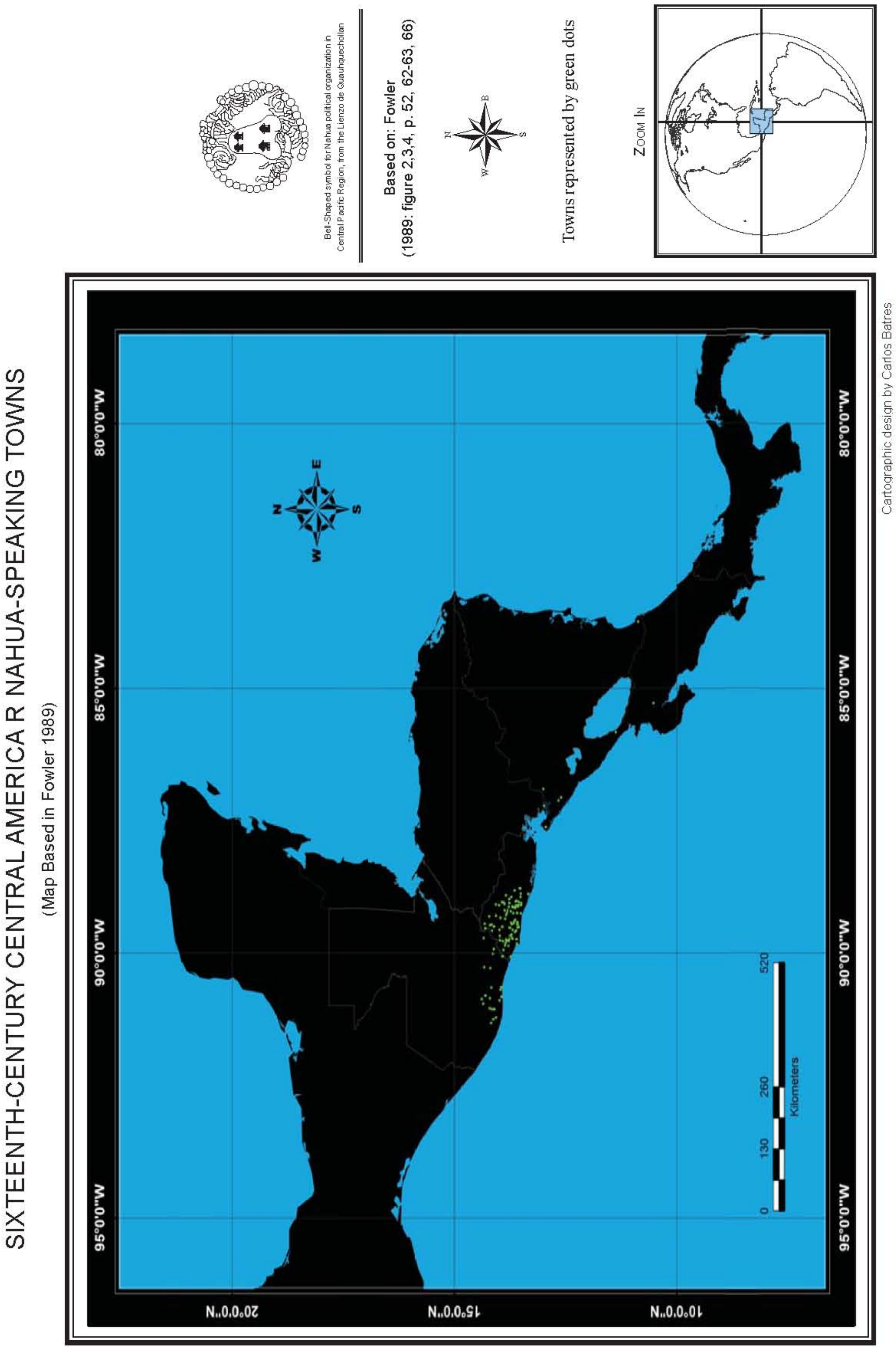

Figure 13: Mid-Sixteenth Century Nahuatl-Speaking Towns

important Nicaraguan indigenous leaders that were written by the friar Francisco de Bobadilla[15] in 1528.

Bobadilla recorded descriptions by indigenous Nicaraguan leaders of their place of origin (Francisco de Bobadilla in Oviedo y Valdés 1945:Vol. XI, bk. 4, ch. 2, p. 82) . The indigenous inhabitants of Nicaragua told Bobadilla that the places of origin of their ancestors before arriving to Nicaragua were the towns of *Ticomega and Maguategua*[16] and that these were located in the West. According to the Nicaraguan leaders, their ancestors left those towns because they were slaves to masters who treated them badly (see Appendix B for the Spanish quote).

Also writing about the origins of the inhabitants of the southern Mesoamerican region, Fray Juan de Torquemada[17] explained that the natives of Nicaragua originally lived in the Soconusco region (see Appendix C for the Spanish quote). In his book, *Monarquia Indiana*, Torquemada also mentions that their land had been invaded by the Olmecas[18]. As a result of this invasion, these settlers left their lands in Soconusco and migrated southward along the Pacific coast until eventually settling in Nicaragua. Torquemada indicates that those migrants who settled in the Guatemalan towns of *Mictla (*modern town of Asunción Mita) and *Yzcuintlan* (modern town of Escuintla) were called *Pipiles* (Torquemada 1943:Vol. I, bk. 3, ch. 40, pp. 331-333).

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15 According to Miguel León-Portilla (1972:111), Bobadilla's interview with the Nicaraguans is the first ethnographic work on Nahua cosmovision and religious beliefs in the New World.

16 Lehmann (1915:4; 1920:2, 1006) proposes that Ticomega is the town Tocoman located in Morelos, and Maguatega is Mihuatlan located in Puebla, both of which are located in central Mexico.

17 Torquemada was Franciscan friar and the official chronicler of his order in New Spain during the late sixteenth- and early seventeenth-century. His chronicle, *Monarquía Indiana* was written in 1613 and published in 1615.

18 Wigberto Jiménez Moreno identified the Olmecs mentioned by Torquemada in 1615 as the Olmeca-Xicalanca or the historical Olmecs. This group was comprised of three ethnic groups (Nahua, Mixtec, and Chocho-Popolocas) and had conquered Cholula at approximately A.D. 800 (see Jiménez Moreno 1942:125-129; 1959:1075; 1966:62-63).

In his *Obras historicas*, Don Fernando de Alva Ixtlilxochitl (1891) wrote about the Toltec diaspora. Ixtlilxochitl implies that the inhabitants of Nicaragua had been descendants of the Toltec people (see Appendix D for the Spanish quote), whose diaspora was caused by tremendous drought that obligated them to move far away and eventually settle in the Nicaraguan territory (see Appendix E Spanish quote)(Ixtlilxochitl 1891:Vol. I, ch. 4, pp. 36-37).

Torquemada, who was a good friend of Ixtlilxochitl, also included commentaries on environmental disasters that caused the Nahua migrations. He describes that on two occasions, climatic events caused major disasters that displaced the Nahua settlers of Central Mexico (Torquemada 1943:Vol. 1, bk. 2, ch. 66, 73, 81, pp. 192, 203, 218). The first event was a terrible flood that occurred during the reign of the Aztec ruler, Ahuizotl (ca. A.D. 1473-1502). The second was a prolonged drought that occurred during the fourth year of the government of Ahuizotl's successor, Montecuhzoma II Xocoyotzin (ca. A.D. 1502-1520). The population of Central Mexico recovered after each disaster, and the Aztec governors extended their dominions towards the provinces of Guatemala because this region was rich in "green feathers, cacao, balsam, and other resins" (Torquemada 1943:Vol. 1, bk. 2, ch. 73, p. 192).

One and a half centuries after these works, Francisco Antonio de Fuentes y Guzmán[19] wrote about the origin of the Nahua population in Guatemala. Writing specifically about the *Pipils* of the region of Escuintla situated in the Pacific coast of Guatemala, Fuentes y Guzmán (1932) recorded that the Nahua-Pipils arrived

19 A major source for the ethnohistory of the *Pipils* is the chronicler Francisco Antonio de Fuentes y Guzmán. In 1690, he wrote *Recordación Florida: Discurso Historial y Demostración Natural, Material, Militar y Política del Reyno de Guatemala*. In this document, he used native Nahua-Pipil documents to describe the conquest and behavior of this cultural group of the Pacific coast. Although the data presented by Fuentes y Guzman must be taken with caution, the information he recorded came from his personal observations of this region where his grandfather Rodrigo and his father Antonio held the position of *Corregidor*, magistrate or a district official of a *corregimiento* (Jones 1994:331; Lutz 1994:312), of Escuintla and Sonsonate (Chinchilla Mazariegos 1996:60; Gavarrete 1932:xix), two well-known Nahua-Pipil regions.

under the pretext of being merchants (see Appendix F for the Spanish quote). He also documented that in reality, they were Mexican mercenaries that had been sent by the Aztec governor *Ahuitzotl*[20]. Gradually this population infiltrated the south coast region and occupied the central Pacific coast of Guatemala, where they identified as *Pipils*.

According to Fuentes y Guzmán's (1932) account, the arrival of the Nahua population to Central America was the result of diverse factors that included ethnic conflicts, climatic disasters, commercial and political matters. The Nahua population of Guatemala mentioned in these accounts was part of the Nahua population that had migrated from Soconusco, Mexico, to Nicaragua. In Guatemala, these groups settled in the Asunción Mita and Escuintla regions and were called *Pipils*. The dates of these events are uncertain although some historical figures such as Ahuitzotl and Montecuhzoma, who are known to have lived between the end of the fifteenth and beginning of the sixteenth centuries, are mentioned. While accounts vary slightly, it is certain that the *Pipils* of the Pacific coast of Guatemala were Nahuas who spoke the Mexican or Nahuatl language.

Nahuatl Language

When the Spanish arrived in Central America during the conquest period, they found multiple territories in which people spoke the Nahuatl language (Beekman and Christensen 2003:116; Fowler 1989a:3). In 1524 and 1526, in his travels to *Las Hibueras*[21], Hernán Cortés (1963:291) , documented that his

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20 Fuentes y Guzmán had many Nahua-Pipil documents that now are lost. Eric Thompson (1948:13) has commented that those documents contained information about the arrival of the Aztecs to Guatemala during the time of the Aztec ruler Ahuitzotl (ca A.D. 1473-1502).

21 *Higueras* (or *Hibueras*) and Honduras were both names for the region that is today Honduras

interpreter Malintzin (also known as la Malinche or Doña Marina), who spoke both Nahuatl and Chontal, communicated without trouble with the inhabitants of the Naco Valley, Honduras. This suggests that one or both of these languages were spoken in the area. In Nicaragua, Nahuatl speaking towns were recorded in the northwestern portion of the country near the Isthmus of Rivas and in the Atlantic coast littoral region (see e.g., Benavente Motolinía 1971; Francisco de Bobadilla in Oviedo y Valdés 1945; Torquemada 1943). In El Salvador, densely populated Nahuatl speaking towns were found throughout the entire western portion of the country during the sixteenth-century (Fowler 1989a).

In Guatemala, there is clear evidence that the Mexican Nahuatl speakers, who were allies of the Conquistador Pedro de Alvarado, had no trouble speaking with important indigenous leaders[22] (Garzon, *et al.* 1998:48). Between the sixteenth- and eighteenth-centuries, ethnohistoric documents register Nahuatl-speaking populations that were referred to as towns that spoke the "Mexican language" in the eastern portion of Guatemala and in the Pacific coast region (see Cortés y Larraz 1958; García de Palacio 1587; Pineda 1982; Remesal 1964; Torquemada 1943). Nahuatl was the Mexican language that they were referring to.

Nahuatl is one of the twenty-seven languages in theYuta-Nawan (Kaufman 1989:1) or Uto-Aztecan (Campbell 1985:3-4) family. This proto-language first divided into northern and southern groups (Campbell 1985:3; Hale 1958:107), and then the southern group divided into western and eastern varieties (Dakin

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and small parts of neighboring Guatemala, El Salvador, and Nicaragua in the early sixteenth-century (Restall and Asselbergs 2007:n. 22, p. 69).

22 At the time of the Spanish conquest, the Nahuatl was a *lingua franca* spoken by important indigenous leaders and merchants who moved throughout Mesoamerican territories(Lockhart 1991). It was one of the first languages from Mesoamerica that Spaniard learned to speak and became the language that facilitated the Spaniards' campaigns, conquest, and evangelization in the New World (Luckenbach and Levy 1980:455).

and Wichmann 2000:58; Macri and Looper 2004:285-286). The eastern[23] brand of the language family was spoken in the Pacific coast of Soconusco, Mexico, and through Central America[24]. Today in this region, Nahuatl is spoken by a limited number of people living in El Salvador and Nicaragua (Campbell 1985; Fowler 1989a). In Guatemala, the Nahuatl language is extinct. Nevertheless, it was spoken in Guatemala between the fourteenth- and sixteenth-centuries and was one of the five major languages spoken by Pacific coast populations.

At the time of the Spanish conquest, the principal languages of the Pacific coast area were Kaqchikel Maya, Tz'utujil Maya, Xinca, Poluca, and Nahuatl (see Figure 14) (Chinchilla Mazariegos 1996; Cortés y Larraz 1958; Crespo 1935; Estrada Monroy 1972; Feldman 1990; Solano 1974). Nahuatl was spoken by the inhabitants of the central zone who were known as *Pipils* (for ethnic identification herein, Nahua-Pipil is used).

The Nahuatl word *pipil (*plural *pilli*) or *pipiltin* means "children of someone [important]"and noble (Boone 2000:25; Séjourné 2004:25). Francis Polo Sifontes (1989) indicates that the use of the word *pipil* by the Mexican Nahuas was to indicate the dialectal difference between the Central Mexican variant /tl/ in contrast to the Central American variant /t/[25], used by Nahua-Pipil of Guatemala.

23 The eastern variety later spread to the northeastern Huasteca (Mexico), and to the south in the regions of Sierra of Puebla, the Gulf Coast, and Chiapas, Mexico (see Patch 1994:240; Restall 1997:n 44, p. 92). Nahuatl speakers in southern Veracruz, Tabasco, and Chiapas, like those of Central America, reduced the earlier /tl/ sound to a /t/ (Patch 1976:240; Restall 1997:n 44, p.92).

24 In Central America, the Nahuatl varieties or dialects have been referred to by different names such as: "Nahuat, Nahuate (Naguate), Mejicano (mexicana), Mejicano Corrupto (Corrupt Mexican), and Pipil" (Campbell 1988; Canger and Dakin 1985:358; Dakin and Wichmann 2000:58; Macri and Looper 2004:286), but today "Nahuatl" is used as a general term which encompasses the different modern varieties (Canger 1980:94; Lastra de Suárez 1974:392).

25 The dialectal differences between the Central American Nahuatl and Mexican Nahuatl are reflected in the uses of /tl/, /t/, and /l/ (Luckenbach and Levy 1980:55; Swadesh 1954). These phonetic differences had been used to establish three dialectic groups called Nahuatl, Nahuat, and Nahual. These early linguistic divisions, were supported by methods of glottochronology reconstruction (Fowler 1989a:6) that established dates of divergence of the proto Nahuatl language. This dialect classification is no longer accepted because it is oversimplified (Campbell and Langacker 1978; Dakin 1983; Lastra de Suárez 1974).

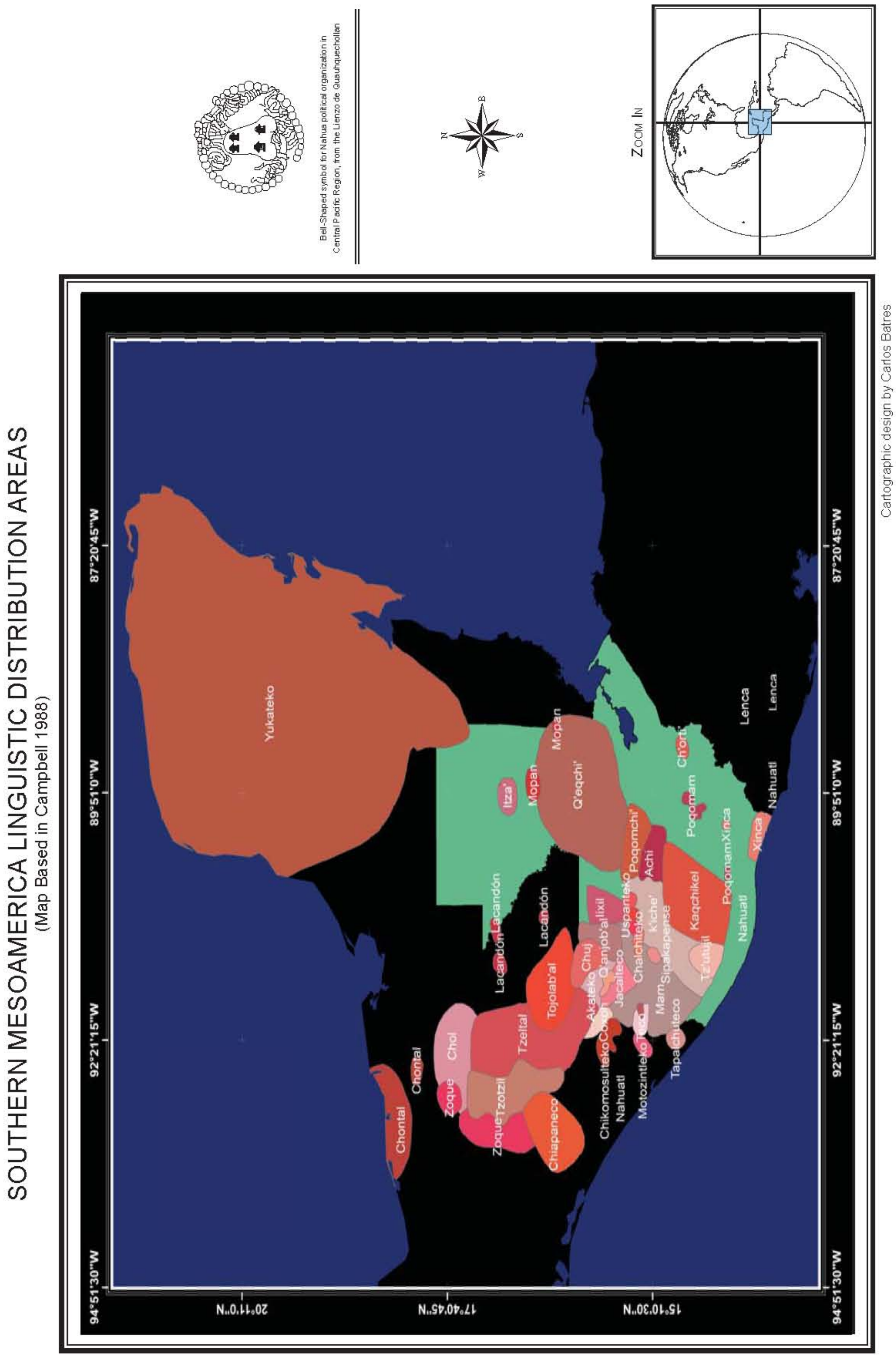

Figure 14: Southern Mesoamerica Linguistic Distribution

The use of *pipil* word may imply people who speak like children, but it is also used as honorific title to noblemen (Fowler 1989c:240; Séjourné 2004:25).

Guatemalan Nahua-Pipil Territory

In Guatemala, the extent of areas that the Nahua-Pipil occupied in Pre-Hispanic times is not clear. Several towns with Nahuatl-speaking populations were registered in the Pacific coast region during sixteenth-century. These towns were located in both the *bocacosta* and the coastal plain. The towns of Asunción Popocatepeque, Escuintla, San Andrés Osuna, San Juan Aloteque, San Juan Mixtán, and Santiago Cotzumalguapa were recorded in the *bocacosta* or piedmont zone. The towns of: Amayuca, Amixtán, Chipilapa, Iztapa, Masagua, Miguatlán, Santa Ana Mixtán, Tehuantepec, Tescuaco, and Utanzingo were recorded for the coastal plain (Chinchilla Mazariegos 1996:75-79; Fowler 1989a:52-53; Polo Sifontes 1979:38-39; Solano 1974; Thompson 1948:fig. 1, pp. 6, 7-16). Many of these towns were bounded from east to west within the Madre Vieja, Coylolate, Acome, and Achiguate rivers drainages, and from north to south between the volcanic cordillera and Pacific Ocean. This area covered approximately 4800 Km^2. The northern and eastern sides of the Nahuatl-speaking area were delimited by the Tz'utujil Maya region. The Kaqchikel Maya territory bordered the northern and northwestern margins while the western edge was bordered by the Xincan region.

Sociopolitical Organization

L. Feldman, who has studied *El Título de Ixhuatán*[26], found that throughout the text several Nahua-Pipil towns are mentioned, including

26 *El Título de Ixhuatán* is a seventeenth century document written in a regional Nahuatl. It has only been partially transcribed (Bove, *et al.* 2004:2003).

Escuintla (Izcuintepeque) and Masagua. The names of some principal leaders of these towns are also mentioned as well as the *altepetl*[27] sociopolitical structure of the Nahua-Pipil (Feldman in Bove, *et al.* 2004:8-9). In the Lienzo de *Quauhquechollan*[28], a great scene is depicted of a battle in which the *Quauhquecholtecan* (indigenous Spanish allies) and the Spaniards were engaged against the local population (Asselbergs 2004; Ortiz, *et al.* 2007). In the center of the scene is a circle around a "bell-mouth mountain with four houses " (see Asselbergs 2004:164, fig. 74). Asselbergs (2004:164) suggests that this pictogram references the *altepetetl* of Izcuintepeque (Escuintla) and its four *calpul* units(see Figure 15).

A simple *altepetl* is frequently comprised four, six, or eight parts, known as *calpul.* Literally, *calpolli* means "big house" (Lockhart 1992:16). Each *calpul* had its own name, leader, and often its own ancestral god. For the Nahuas, Lockhart has established through ethnographic and ethnohistoric investigation that each *calpul* generally had its own god, but that the god and temple of the highest-ranking *calpul w*as the most important within the *altepetl*. The *calpul units* were organized hierarchically with the strongest *calpul's* leader and god exercising authority over the others (Lockhart 1992:20-23).

Each *calpui* held part of the territory of the *altepetl*, which was used by its own members. Within a complex *altepetl,* four constituent *altepetl* might be included, each of which were divided into *calpul* (Lockhart 1992:20-23).

27 *Altepetl is* a Nahuatl word that is a contraction of *in atl in tepetl,* meaning "the water(s), the mountain(s)" and thus clearly referred to territory (Lockhart 1992:14).

28 The *Lienzo de Quauhquechollan* was composed by Nahuas from Quauhquechollan (the modern San Martin Huaquechula, in the Mexican state of Puebla) presumably in Ciudad Vieja, Guatemala in the 1530. The original painting measures 235 by 325 centimeters and is at present in the collection of the Casa del Alfenique museum in Puebla, Mexico. This document records a military campaign that the Quauhquechollan and Jorge de Alvarado, brother of Pedro de Alvaro made in some territories of Mexico and Guatemala in 1527. This campaign was made over the course of three years. This campaign was carried out through the same and similar territories and towns that Pedro de Alvarado had conquered in Guatemala in 1524 (Asselbergs 2004:14; Restall and Asselbergs 2007:n. 13, p. 94).

LIENZO DE QUAUHQUECHOLLAN FRAGMENT ILLUSTRATING THE SPANISH AND THEIR INDIGENOUS ALLIES CONQUERING THE CENTRAL PACIFIC COAST REGION

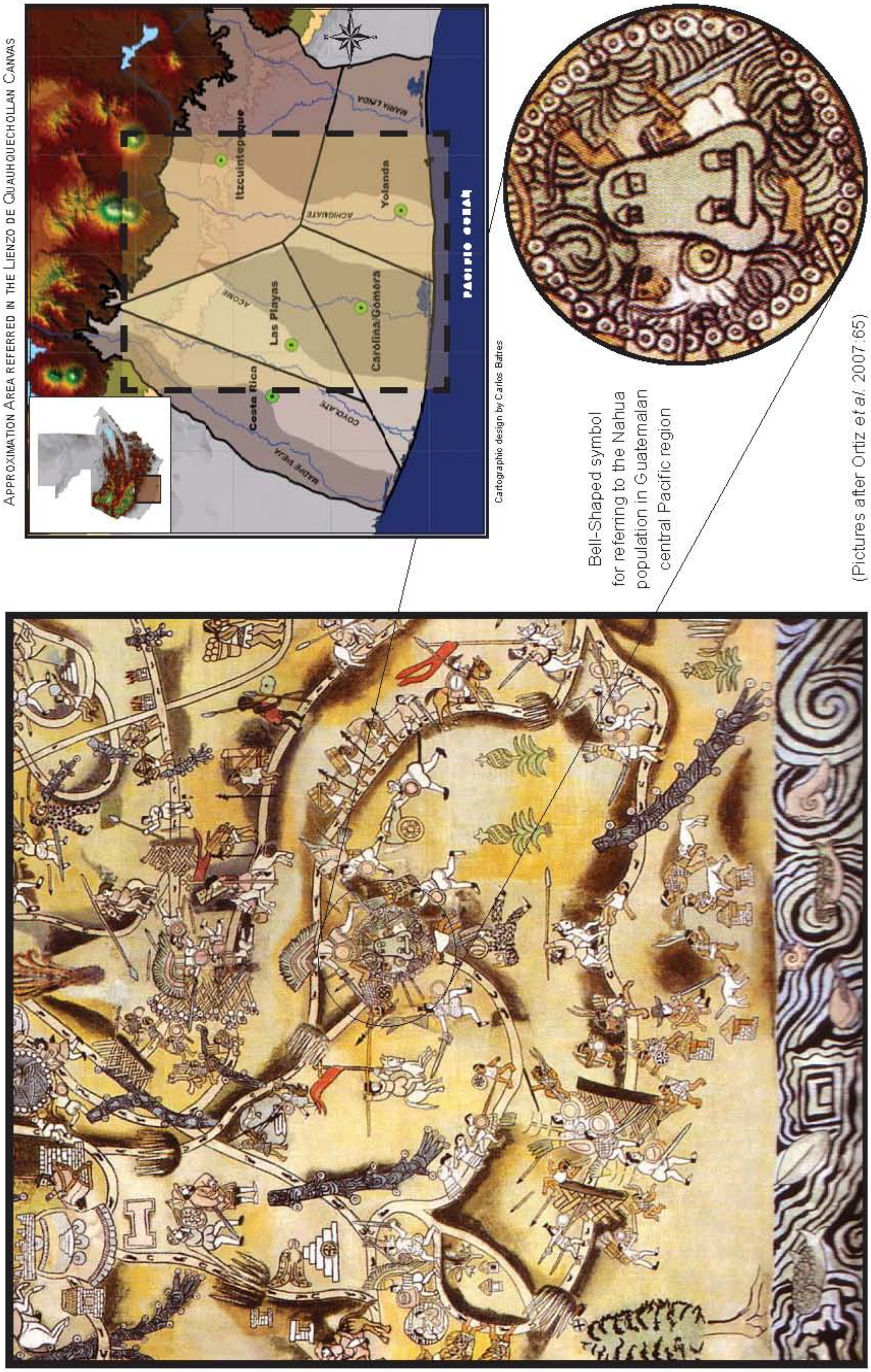

Figure 15: Lienzo de Quauhquechollan, Central Pacific Coast Conquest

The Nahua people called their leader *tlahtoani*[29] (speaker or *tlahtohqui*, speakers*)* which can refer to lords, governors or rulers (Karttunen 1983:266). The *tlahtoani* consulted with *teuctlahtoani* (leaders) and nobles from the other *calpul* in his palace (*tecpan*). The leader was responsible for collecting tribute and taxes for the entire *altepetl*. Each *calpul* would contribute to the *altepetl* through tribute paid in the form of food and/or warriors. Workers were recruited through a draft process that rotated through the *calpul* in a fixed order within the *altepetl* (Lockhart 1992:14-17). The *altepetl* leader (in this case the *teuctlahtoani)* assigned land rights to the *calpul* leaders who were responsible for the distribution of their lands among the various *calpul*. Subjects paid tribute to their *calpul* heads, who then paid tribute to the *altepetl* leader (Fowler 1989a:195, 200).

Fuentes y Guzmán offers a description of the Nahua-Pipil socio-political organization in Escuintla. He writes that the Nahua-Pipil government was led by "four captains and one main captain", who was the highest leader. For example, Jutecotzimit, the head Nahua-Pipil leader in Escuintla, named four captains as *calpul* leaders during his rule (Fuentes y Guzmán 1932:Vol. II, bk. 2, ch. 5, pp. 90-91). Jutecotzimit also created a council of eight ministers who wore large tunics that were differentiated from one another hierarchically, by color. Under these ministers were lower ranking ministers that executed the orders and decisions made by Jutecotzimit, the *calpul* leaders (captains), and the eight ministers (Fuentes y Guzmán 1932:Vol. II, bk. 2, ch. 5, pp. 90-92).

Nahua society included nobles, commoners, and slaves. Although noble status was primarily hereditary, commoners who had distinguished themselves in warfare could also achieve noble status. Clothing, insignia, hairstyles, and headdresses were signifiers of status. There were strict rules governing the

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29 In many historic and modem writings *tlahtoani* is written as tlatoani and tlatoque.

wearing of specific types of clothes and ornaments. Only the nobles could wear cotton clothing in a variety of colors. Warriors and priests wore feather headdresses. The wearing of nose plugs or ear plugs made of precious metal or stone was restricted to the nobility or the warrior class (Fowler 1989a:199-200).

Nahua nobility had both ceremonial and political responsibilities and their advisors consisted of members of the leading noble lineage. The head leader, along with his council, made decisions about warfare, performed civil ceremonies and directed the planting of crops (Fowler 1989a:192). Because the nobility had religious responsibilities, there may have been a priestly noble class (Fowler 1989a:195). The priesthood was closely related to the *tlatoani* and was in charge of the temple. The *calpul* likely regulated their duties to the *tlatoani* through the temple and the performance of rites and festivities (Lockhart 1992:18).

The religious beliefs of the Nahua-Pipil in the region of "Micla" [Asunción Mita] are recorded in Diego García de Palacio (1587) who visited the *Gobernación de Guatemala*. He recorded that the Nahua-Pipil had a high priest whom they caled *Tecti* and who dressed in a blue tunic and wore a Quetzal feathered headdress. The paraphernalia of the high priest included a staff as a symbol of his religious authority. Under the high priest was another shaman priest, called the *tehu a matlini*, who read the books and made prophecies. Below the principal priest were lesser priests. Two were known as *teupixqui* who dressed in robes of different colors and were assisted by their council. Another priest oversaw the organization of the paraphernalia, rituals, and made the sacrifices. Beneath these leaders, a group of musicians used trumpets for announcing the religious ceremonies (García de Palacio 1587:62-64).

De Palacio (García de Palacio 1587:64) mentions that when the main priest died he was buried inside his own house and seated on a painted bench. The entire town cried and wailed for fifteen days of mourning. A new principal priest

could be selected from any of the other four priests of the second rank, or the selection could be the first son of the dead priest. When the selection was done, the person who appointed the new main priest made a blood autosacrifice. This was done by piercing his own tongue and genitals with obsidian. He then offered the blood to the sun to the deities Quetzalcoatl and Itzqueye, (García de Palacio 1587:64-66).

The commoners wore rougher textiles made of *henequen* (agave fiber) and carried out all subsistence activities, such as agriculture, fishing, and hunting. They were also involved in part-time craft production including pottery, ground-stone and chipped-stone artifacts, cotton cloth and clothing, as well as articles of straw or fiber, wood, or feathers. Many other commoners were traders, market vendors, and soldiers (Fowler 1989a:197). At the lowest level of Nahua society were slaves, who were primarily war captives but might also have sold themselves or their children into slavery (Fowler 1989a:197-198).

Economic Resources

Earlier chroniclers, missionaries, and modern scholars agree that the south Pacific coast region contains some of the best lands for crop production in Guatemala. Examining iconographic representations of botanicals on the monumental art found at Cotzumalguapa archeological sites, Debora Kerr (1998) identified economic crops such as maize, beans, pineapple, zapote, nance, and cacao during the pre-Hispanic period. Cacao was one of the more conspicuous botanical motifs in the monumental art of Cotzumalguapa. Eagles, turtles, deer, snake, crab, shells, iguana, fish, and jaguar are also present in this iconography (see Kerr 1998). Other resources of the Nahua-Pipil territories that were recorded in the ethnohistorical documents included indigo, cotton, salt and cacao (Cortés y Larraz 1958:Vol. II, pp. 241; Fuentes y Guzmán 1932).

The importance of cacao to Mesoamerican cultures extends to the Formative period (see Coe and Coe 1996; Dakin and Wichmann 2000); in later periods it was associated with “royalty, nobility, long-distance merchants, and high-ranking warriors” (Coe 2005:1). The best regions for cacao production are found in the humid climate zones with deep soils and good drainage such as those found in the South Pacific coast corridor (Bergmann 1969; Chinchilla Mazariegos 1996; Gomez-Pompa, *et al.* 1990; Young 1994). Cacao was also recorded as an important resource in early Spanish documents that discussed the Soconusco region of Mexico, Izalco in El Salvador, as well as the Escuintla and Suchitepéquez regions of Guatemala (Benzoni 1970; García de Palacio 1587; Torquemada 1943). All of these areas, fertile in cacao production, were also known to be occupied by the Nahuatl speakers (Chinchilla Mazariegos 1996; Fowler 1989a; Gasco 1989; Voorhies and Gasco 2004).

In Escuintla, the Guatemalan chronicler Francisco de Fuentes y Guzman (1932), mentioned internal cacao conflicts among the Nahua-Pipil. The Nahua-Pipil leader Guachichmichin was defeated by his own people because he increased the labor on his cacao plantations and required higher tributes, some of which were paid in cacao (Fuentes y Guzmán 1932:Vol. II, bk. 2, ch. 5, p. 90). Cacao as regional product was also exchanged in commercial relationships between the Nahua-Pipil and the Highland Kaqchikel Maya, K’iche’ Maya and Tz’utujil Maya (Braswell 1998; Robinson 1998; Swezey 1998). The importance of cacao led highland groups to the coast to gain access to cacao production.

The coast was an area of cacao, cotton, and indigo. These resources were appreciated by both coastal and highland polities, who wanted to have control over these domains (Chinchilla Mazariegos 2005a:7) . At the end of the fifteenth-century, the K’iche’ Maya conquered the eastern section of the Guatemalan Pacific coast to Soconusco, Mexico, which had been previously conquered by the

Aztecs ca. A.D. 1486-1502 (Voorhies 1989:44; Voorhies and Gasco 2004:4). The Kaqchikel Maya were interested in controlling the fertile central piedmont region, which lead to conflicts with the Tz'utujil Maya and Nahua-Pipil, who had territorial domain when they arrived (Chinchilla Mazariegos 1998).

By the end of fifteenth-century, the Maya Kaqchikel lords from Iximche' had extended their political domain to the piedmont region. During this period, the lords of Iximche' were at war with the Nahua-Pipils from the town of Izquintepec and other neighboring towns. The northern and south-eastern portion of the Nahua-Pipil, the Tz'utujil Maya territory, was occupied by the Kaqchikel Maya. Today, this region covers the modern municipalities of Siquinalá, Cotzumalguapa and Patulul. Near the end of the Late Postclassic period, the Kaqchikel Maya territorial domain included the *cacao* plantation zones that had once belonged to the Nahua-Pipil and Tz'utujil Maya (Chinchilla Mazariegos 1996:88; 1998). In the *Título de Alotenango* (Polo Sifontes 1979:39-41) , land conflicts between the Nahua-Pipil and the Maya Kaqchikel continued through the first half of the sixteenth-century.

Alliances

The Nahua-Pipil lineages of the coast comingled with Maya lineages of the highlands (Fuentes y Guzmán 1932; Termer 1936; Thompson 1948; Van Akkeren 2004b). The Tz'utujil Maya from Lake Atitlán in the highlands had two dominant lineages or houses: the *Saqb'in* (the weasel lineage) and the *Tz'ikinaja* (the bird lineage) who claimed to be of Mexican descent. These were originally Nahua-Pipil lineages from the Pacific coast that had become integrated with the Tz'utujil Maya people (Van Akkeren 2004b:1047). Additionally, in the *Título de los Señores de Sacapulas* (Acuña 1969), the K'iche' Maya lineage, Q'annil, said

it was from the Pacific Coast and the town of 400 ceibas 400 pyramid-temples[30]. Van Akkeren (2004b:1049) has traced the origin of the Q'annil from the city of Tochtepec, located in the Gulf Coast of Mexico, to the Pacific Coast. The K'iche' Toj and the Q'annil lineages introduced the Tojil and Kukulkan cults dedicated to the deities Quetzalcoatl and Mixcoatl, to their capital city of Q'umarkaj'-Utatlan (Van Akkeren 2004b). To some degree, the Nahua-Pipil spread Nahua or Mexican ideology[31] to the highland inhabitants (Van Akkeren 2004b:1045).

Political Conflicts

During the Postclassic period, a series of conflicts among Kaqchikel Maya, K'iche' Maya, Tz'utujil Maya, and Nahua-Pipil political entities occurred as a consequence of territorial and political expansion of those groups (Carmack 1973, 1981; Carmack, *et al.* 1996; Fox 1981; Fuentes y Guzmán 1932; Recinos and Goetz 1953). In these conflicts, the Nahua-Pipil and the Tz'utujil Maya were allies against the K'iche' Maya and the Kaqchikel Maya. For example, later in the sixteenth-century Fuentes y Guzmán (1932:Vol. II, bk. 1, ch. 9, pp. 52-58) wrote

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30 This City in colonial times was known as *Tzentzontepetl* (hill/town of Four Hundred). Archaeologically, was identified by Bove (1989:49) as Ixtepeque, a important city during Late Classic in the Pacific Coast. The Q'annil lineage says it founded the city of Four hundred *Ciebas*/Four hundred Temples-Pyramid (Van Akkeren 2000:1047; 2004b).

31 During the Postclassic period the Maya regions such as Yucatan (Chichen Itza'), Petén (Seibal) and the Highlands (Utatlán, Iximche and Zaculeu) were influenced by Mexican ideology (Carmack 1973; Navarrete 1999:397; Sharer 1994:424-26; Thompson 1948). Due to these influences, Maya peoples were said to have been "Toltecized" (Carmack and Mondloch 1983:16-18; Lutz 1976:50), "Nahuatized" (Kaufman 1976:113) or in more general terms, Mexicanized (Garzon, *et al.* 1998:46-48; Navarrete 1999:397; Sharer 1994:424-26; Thompson 1948). The hybridized Chontal-Maya, known as the Putun, were one of the groups responsible for the spread of Mexican ideology and practices as a consequence of their trade networks during the Postclassic period (Sharer 1994:426-31). Another group that spread Mexican ideology as a result of their migration to the southern Mesoamerica Pacific coast was the Nahua-Pipil (see Fowler 1989a; Sharer 1974). They also interacted with Maya Highland lineages (Van Akkeren 2004a; b:1045). In post-Conquest and Colonial periods Mexicanization was a consequence of the Nahuatl-speakers that arrived as auxiliaries to Spanish conquers and later were resettled by the first (add citation). The Mexicanization is used to refer to the interrelationship between Maya people and other cultural groups from central Mesoamerica region.

about the earlier Sixa battle in which a Nahua-Pipil lord died while directing a group of Tz'utujil Maya soldiers against the K'iche' Maya. He also told the story of another war in which the K'iche' ruler Kicab and his troops conquered several Tz'utujil Maya and Nahua-Pipil' towns.

Originally, the Kakchiquel Maya and K'iche' Maya were allies. Eventually the Maya Kakchiquel established an independent polity whose capital was Iximche' (Chinchilla Mazariegos 1996:80; Recinos and Goetz 1953). The *Memorial de Sololá o Anales de los Kaqchikeles*[32] (Recinos and Goetz 1953:104) describes their conflicts with the Nahua-Pipil. It refers that Chopená Tziquín Uqá, the third son of the Kaqchikel Maya ruler Vukubatz, died during a battle at Panatacat, also known as Izcuintepeque, which was the capital city of the Nahua-Pipil (Asselbergs 2004:163; Polo Sifontes 1989:259-263; Recinos and Goetz 1953). Another battle between the Kaqchikel Maya and the Nahua-Pipil was recorded on the "... day 5 Ah (March 12, 1521) when our grandfathers went to the war against Panatacat,..." (Recinos and Goetz 1953:120).

Three years later, the rivalry between the Kaqchikel Maya and the Nahua-Pipil persisted. On the day 1 Hunahpú (April 12, 1524), the Spaniards and their Mexican auxiliaries arrived at Iximche'. The Kaqchikel Maya lords Belehé Qat y Cahí Imox welcomed and received the Spanish conquistador Pedro de Alvarado, who they named *Tunatiuh* and to whom they had sworn allegiance[33]. At Iximche',

32 The *Annals of the Kaqchikeles* is a history of these Maya People and their neighbors. This document is a historical narrative from the Maya Kaqchikel primordial creation and migration into highland Guatemala, through the Spanish invasion, down to l6l9 (Restall and Asselbergs 2007:106). The manuscript was written by Francisco Hernández Arana (ca. 1573-1582) a descendant of a noble Kaqchikel Maya lineage and direct witness of the conquest of his kingdom by the conquistador Pedro de Alvarado in 1524 (Carmack 1973).

33 The Kaqchikel Maya policy was to made alliances with the Spanish as soon they knew of their presence in Mexico. The Kaqchikel Maya first sent ambassadors to Cortes in Mexico 1522. The second contact was in 1523, when they sent supplies and slaves to Pedro de Alvarado at the Soconusco region. This alliance was used to defeat their enemies, the K'iche' Maya, Tz'utujil Maya and Nahua-Pipil (Recinos and Goetz 1953:23; Restall and Asselbergs 2007:33).

Alvarado asked the Kaqchikel Maya lords who their enemies were (Recinos and Goetz 1953:126-127). The lords answered: "Two are our enemies, oh God!; the Tz'utujil and those of Panatacat (Recinos and Goetz 1953:126). It was from this encounter that the Conquistador Pedro de Alvarado and his Mexican allies were directed to defeat the people at the city of Panatacat (Izcuintepeque).

Spanish Conquest of Izcuintepeque or Panatacat

In 1608, the Nahua chronicler Don Fernando de Alva Cortés Ixtlilxochitl[34] described a number of reasons that the Mexican leaders *Cuauhtémoc*[35] and Ixtlilxuchitl II[36], and the Spanish conqueror Hernando Cortés initiated their military campaigns in southern Mesoamerica (Ixtlilxochitl 1891:Vol. I, Relación 13, pp. 391-94). Exploration of this region took them from the valley of Mexico into the territories of Tehuantepec, Soconusco, and Guatemala. In the region of Guatemala, the Nahua-Pipil town of *Ixquintepec* (now Escuintla) was ultimately conquered by Pedro de Alvarado, who had been sent there by Hernando Cortés (see Appendix D for the Spanish quote).

The native warriors who allied with the Spanish conquerors were ethnically diverse but the vast majority was Nahuas from Central Mexico. Among the allied groups were the Tlaxcaltecans, Tetzcocans, Huexotzincans, Tepeyacans,

34 Fernando de Alva Cortés Ixtlilxochitl (1578-1650) was a Tezcocan *mestizo* Mexican nobleman descendant of Ixtlilxochitl I and Ixtlilxochitl II (see footnote 36). He was educated at Friar Bernardino de Sahagún's Colegio de Santa Cruz in Tlateloco (Smith 2001:21). As a Mexican historian, he is one of the most important writers for Central Mexican ethnohistory (Fowler 1989a:24).

35 Cuauhtemoc was the last Aztec *tlatoani* of the Tenochtitlan, taking the place of his predecessor Cuitlahuac, who died of smallpox in 1520 (Smith 2001:47, 282). Cuauhtemoc means falling eagle and the suffix *tzin* is like Don or Señor (Mr.) in Spanish language (Andrews 2003:594-595).

36 Ixtlilxochitl II was a *tlatoani* (ruler) of the city of Texcoco and a great-grandson of Netzahualpilli first *tlatoani* from 1409 to 1418 (Smith 2001:159). He was placed as ruler by Hernan Cortés in 1520 (Smith 2001:159). He was placed as ruler of by Hernan Cortés in 1520, and a great-grandson of Netzahualpilli first *tlatoani* from 1409 to 1418 (Smith 2001:159).

Mexicas, Mixtecs, and Nahuas from the region of Soconusco, in addition to the Kaqchikel Maya (Restall and Asselbergs 2007:81). For this reason, the conquest of Tehuantepec, Soconusco, Guatemala and El Salvador territories by Pedro de Alvarado and his troops was referred to as the Spanish-Nahua conquest (Restall and Asselbergs 2007:81). Indigenous writers, in addition to Spanish chroniclers, also record the story of these conquests.

The Tlaxcaltecans[37] recorded the conquest of towns which included Izcuintepeque. Their document is named the *Lienzo de Tlaxcala*[38]. In plate number 80 of a copy of the *Lienzo de Tlaxcala*, the battle for the conquest of the city of the Nahua-Pipil is illustrated. Pictographically, the name of the place of the battle is represented with a pictogram of a dog seated on a hill. In the Nahuatl language, the words *itzcuintli* [dog] y *tepet* [hill] form the word *Izcuintepeque* which in Nahuatl means hill of the dog. In the upper portion of the scene of the battle, *Izcuintepeque* is written using Latin characters (see Figure 16).

In *Memorial de Sololá o Anales de los Kaqchikeles* of the Kaqchikel, it says it the Day 2 Queh [May 9, 1524] when all of the Kaqchikel warriors and their Mexican allies (the soldiers that came with the Spanish from Mexico) went with *Tunatiuh* (Alvarado) to destroy Panatacat (Izcuintepeque), killing the town's people (Recinos and Goetz 1953:127).

Pedro de Alvarado (1924:74) mentioned that indigenous leaders came to see him at the capital city of the Kaqchikel Maya of Iximche'. Those leaders told him that the people of Izquintepec would not obey the Spanish king and

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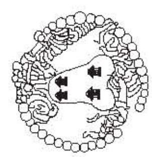
37 The Tlaxcalans were the Spaniards' best-known Nahua allies. They joined forces with the Spanish as early as 1519 and played a very important role in Hernando Cortes' campaign against the Aztec Empire. Tlaxcalans' alliances with Pedro de Alvarado were solidified by marriage. Alvarado married the Tlaxcalan Luisa Xicotencatl with whom he had two children. His Brother, Jorge de Alvarado, married her sister, doña Lucía. These two women were part of the royal Tlaxcalan family (Restall and Asselbergs 2007:79).

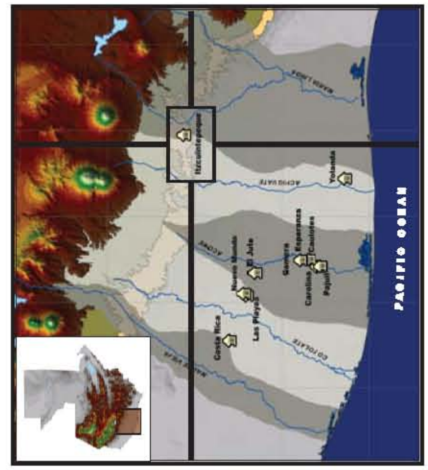
38 The *Lienzo de Tlaxcala* was made in Tlaxcala Mexico at the request of Don Luis de Velasco, the second viceroy of New Spain. The original is now lost but an early description and several copies have been saved (Restall and Asselbergs 2007:99).

IZCUINTEPEQUE SPANISH CONQUEST ILLUSTRATED IN THE LIENZO DE TLAXCALA



Bell-Shaped symbol for Nahua political organization in Central Pacific Region, from the Lienzo de Quauhquechollan

LOCATOR



Cartographic design by Carlos Batres

Figure 16: Lienzo de Tlaxcala, Izcuintepeque Conquest

would not allow that the Spaniards or any another peoples to pass through their territory.

"... *I* [Pedro de Alvarado] *was assured that this was so, as well by those provinces as by the chiefs of this city of Guatemala, I left with all my people, both foot and horse and remained encamped for three days in a desert. Next morning when we entered the outskirts of the said town, that is very heavily wooded, we found all the roads closed and very narrow-really only pathways because they did not trade with anybody and had no open road. And I sent the cross-bowmen ahead because the horsemen could not fight there on account of the many marshes and wooded thickets. And it rained so much that on this account their watchmen and spies had returned to the town; and as they did not think I would arrive amongst them that day, they were somewhat careless and did not know of my sally until I was in the town amongst them; and when I entered, all the warriors were huddled together in houses because it rained so much, and when they wanted to form they had no time, although some of them still waited and wounded some Spaniards and many of the friendly Indians that were with me, and because of the thick woods and rain, they escaped into the forest, so I had no opportunity to do them any damage except to burn their town. And then I sent messengers to the chiefs, telling them that they should come to give obedience to Their Majesties and to me in their name, and if not, I would do great damage to their land and lay waste to their maize; they were coming, and accepted being vassals of His Majesty, and I received them and ordered them to be good in the*

future; and I remained eight days in this town." (Alvarado 1924:74-76).

In 1529 Pedro Alvarado was accused of committing great atrocities against many the indigenous populations. One of these accusations was of excessive brutality in the conquest of the inhabitants of Izcuintepeque (Viejo Libro 1934:141, 189, 203). More than a century and a half later, an anonymous friar citing the chronicler Bernal Díaz del Castillo, emphasized how arrogantly Pedro de Alvarado and his troops destroyed Izcuintepeque and concludes:

> "*… What was worth more than [a conquest] never was made, but according to justice, that was badly made, and not according to which his Magesty commanded,* [&c.]. *I refer to this so that one sees that among the conquistadores, there were several opinions regarding justice or injustice of these actions of war, and not all of them approved of that which others did …*" (Anonymous 1935:203) see Appendix G for the Spanish quote.

Summary

From Spanish and indigenous perspectives, it is clear that the Nahua-Pipil played an important socio-political role in social landscape of the central Pacific coast during the Late Postclassic period. These data are not limited in their use to determining the arrival and settlement of this group to the region. They also describe the social circumstances and frictions among them and their neighbors that were generated by their arrival there. For example, the Kaqchikel Maya helped the Spanish, along with allied Tlaxcalan troops, to conquer the major Nahua-Pipil center of Izcuintepeque as part of their strategic need to resolve previous cultural frictions in the area.

Also important are the cultural characteristics presented in these documents. The sociopolitical organization of Nahua-Pipil is described in their own Indigenous accounts, in terms of the *altepetl* system. Other documents record how the Nahua-Pipil were part of the social and economical problems of the region that was occupied by other groups.

In addition to these cultural features, the geography of the region is illuminated through accounts. The following chapter discusses the geographical domain where these events took place, and discusses resources produced in this region during the mid-Sixteenth century in the central Pacific coast region.

CHAPTER V.
MODERN GEOGRAPHY AND SIXTEENTH-CENTURY TRIBUTE CROPS

This chapter is divided into two parts. The first part describes central Pacific coastal geography. Altitudinal zones, climate, hydrology, soils, vegetation, and fauna of the region are briefly discussed. The second part examines some colonial-period accounts that describe the economic crops produced in the central Pacific coast during the mid-sixteenth century. This is used to illuminate the pre-Prehispanic economic resources. These crops were embedded within the geopolitical landscape of the Spanish and are used to discuss important features of the Late Postclassic economy of the Nahua-Pipil._

Geographical Zones

The Guatemalan Pacific coast is part of a coastal corridor that extends from the Isthmus of Tehuantepec in Mexico to southern Nicaragua (West 1964:80). This corridor is an intermediate zone between the convergence of the Cocos and Caribbean tectonic plates, and Central American volcanic arc (Chinchilla Mazariegos 1996). In Guatemala, the convergence is a geologic basin consisting of sedimentary and metamórphic rocks, lahars, volcanic sand, and fluvial deltaic deposits. Geological materials are from the Tertiary and the Quaternary formations (Kuenzi, *et al.* 1979; Williams 1960).

The Guatemalan Pacific corridor is 260 Km long and has an 'S' shape. It inclines gradually from the seashore to the stepped-slopes of the volcanic

cordillera (mountain volcanic chain). The eastern portion is 25 km wide, the central area reaches 50 km in width, and the western section is 16 km wide. Due to the vegetation, temperature, and altitudinal differences, the central section of the Pacific coast corridor is divided into three major zones, the *bocacosta* or piedmont, coastal plain and seashore zones (see figure 17).

<u>*Bocacosta or Piedmont*</u>

The *bocacosta* is a narrow strip that moves parallel through the southern volcanic slope. The altitude of this area is between 300 and 1,000 meters above sea level (m.a.s.l). In the Köppen system that uses the native vegetation to classify climatic zone limits (Beck, *et al.* 2005:2) , the *bocacosta* is classified as *Amw'i* or a hot tropical *monsoon* zone (McBryde 1971: Map 6). The area is characterized by forest vegetation and extreme humidity. The climate is semi warm with high rainfall levels throughout the year which results in a poorly defined dry season (McBryde 1971).

The *bocacosta*'s winds are calm. Cool, smooth breezes are between two and ten kilometers per hour (km/h) (INSIVUMEH 2003f). The humidity has an annual average of 80 percent (%) (INSIVUMEH 2003d) and the annual temperatures range between 20^0 and 25^0 Celsius (C) (INSIVUMEH 2003b). Between the months of April and August the temperature reaches 30^0 to 31.5^0 C (INSIVUMEH 2008).

The *bocacosta* region records higher precipitation levels resulting from the convergence of Pacific air masses and Caribbean Trade Winds (Paull 1976:36-37) . This joining originates storms and contributes to excessive rainfall in the *bocacosta* (Portig 1965:75). The average annual rainfall is between 2500 and 3500 mm and occurs during a period of 125 or 150 days (INSIVUMEH 2003c, e) between the months of May and November (INSIVUMEH 2008). The heaviest

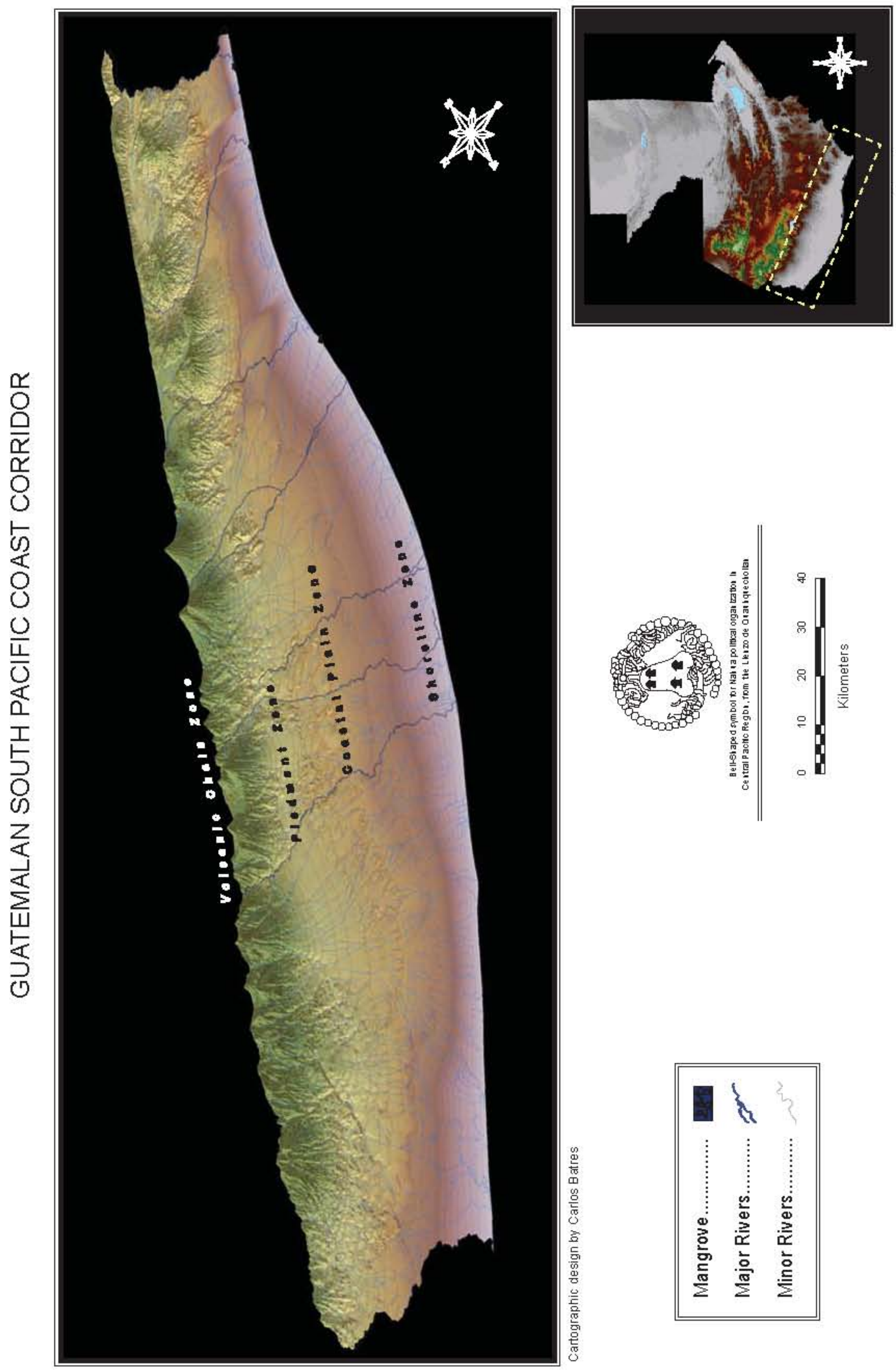


Figure 17: South Pacific Coast Corridor and Geographic Zones

rainfall occurs between June and September with a few weeks of lower rainfall between December and March (McBryde 1971:131, 150). July and August are characterized by a short dry period called *veranillo* or *canícula* (McBryde 1971:150). The pause in rainfall which varies in duration is used by farmers for a second harvest (Chinchilla Mazariegos 1996:56). Due to altitude, orography, vegetation, and climate differences observed throughout, the *bocacosta* is subdivided into lower and upper *bocacosta* areas (Chinchilla Mazariegos 1996:55).

The upper *bocacosta* is the area between 500 and 1,000 m.a.s.l. In the higher altitudes, it is bordered by secondary volcano cones and highland foothills. The area is subjected to periodic effects of modem volcanism because it is part of the volcano chain. The terrain is rugged with steep, ribbed gradients. Narrow ridges are formed by small parallel rivers forming terrain that is dissected by numerous canyons (Chinchilla Mazariegos 1996:5). As the ascent toward the highlands progresses, the monsoon forest closes in and the predominant vegetation is large trees (McBryde 1971:133) . The area has a temperate climate averaging 20^0 to 25^0 C (INSIVUMEH 2003c), but during the dry season (November through April), daytime temperatures can reach 35^0 C (Vivó Escoto 1964:199) although evening and nighttime temperatures are usually cool. The rainfall average is between 2500 to 3000 mm per year (INSIVUMEH 2003c). Primary rainfall is between the months of May and October with an average of 120 days of rain (INSIVUMEH 2003e). The humidity in the area is high and can be over 80% (INSIVUMEH 2003d). The zone is characterized by soft breezes between 5 to 10 km/h (INSIVUMEH 2003f) during the evening which help to decrease the temperature.

The lower *bocacosta* is the transition zone between the rugged upper *bocacosta* and coastal plain Park (savannah terrain). The lower *bocacosta* is

between 300 and 500 m.a.s.l. The area includes lower sections of alluvial river fans as well as outliers of volcanic activity (Paull 1976:27; West and Augelli 1976:388). It is characterized by less mountainous terrain undulating with a series of low hills. The natural forest is thinned along the many stream and river courses that descend from the upper *bocacosta* zone. In this area, the climate is hot throughout the year with temperatures averaging between 25^0 and 30^0 C (INSIVUMEH 2003b) during the day and between 20° and 25° C at night (Vivó Escoto 1964:198). Rainfall occurs on 100 to 120 days (INSIVUMEH 2003e) from the end of July through September. The precipitation in the area is between the 2000 and 2500 mm (INSIVUMEH 2003c) with humidity approximately 75 to 80% (INSIVUMEH 2003d). The wind fluctuates during the day but can be a calm (2 km/h) or smooth breeze (10 km/h) (INSIVUMEH 2003f).

Coastal Plain

From the seashore to the inland, the coastal plain is between 30 and 300 m.a.s.l. and 42 km wide. The park savanna is the predominant landscape. Some forested areas, corozo palms, and grassy pastures are typical vegetation of the area (McBryde 1971:5). Today, only a few areas with this vegetation are observable due to sugar cane plantations. Sugar cane is now the major crop in the central Pacific coast region.

In the coastal plain, the average annual temperature is between 25^0 and 28^0 C(INSIVUMEH 2003b). The humidity averages 75% (INSIVUMEH 2003d). Due to the high temperatures, a cold season is not well defined. The wind in the coastal plain zone changes throughout the day because it opens toward the ocean. Breezes average 6 km/h (INSIVUMEH 2003f).

The dry winter season continues from November through April and rainfall occurs between July and September (McBryde 1971:4-5). In relation to the *bocacosta*

region (Upper and Lower zones), the coastal plain has the lowest average rainfall (Portig 1965:74), between 1500 and 2000 mm (INSIVUMEH 2003c) occurring over a period of only 75 to 100 days (INSIVUMEH 2003e). The climate in the coastal plain zone is generally semi-dry or dry. In the Köppen system, it corresponds to a hot tropical or *Awgi* climate.

Estuary

The shoreline consists of linear and pro-grading fossil beaches that extend up to 2 km inland (Chinchilla Mazariegos 1996) and between 0 and 30 m.a.s.l. In the area, the mouths of rivers form estuary systems and sandbars (Kuenzi, *et al.* 1979:17; Paull 1976) . The estuary zone consists of variable but narrow bands of brackish water channels that run parallel to the coast where mangrove forests alternate with jungles of low-growing fan palms (McBryde 1971:5). The climate in the area is hot (27^0- 29^0 C) with average humidity of 75% (INSIVUMEH 2003d). The rainfall season is short, having only 75 days of rain and 1500 mm precipitation (INSIVUMEH 2003c, e). Rainfall occurs primarily between the months of July and August. The wind speed changes throughout the day but usually does not exceed 8 km/h (INSIVUMEH 2003f).

Biotic, Hydrologic, and Soils Resources

The different altitudinal zones, topography, and micro-ecological areas facilitate a great diversity of fauna and flora. The river network or hydrological basins posited alluviums each raining season, facilitating the formation of soils fertile agricultural. Below is described some of the biotic, hydrologic, and soils sources found in the south Pacific coast are.

Fauna

The primary fauna in the Pacific coast are small mammals (Calvo Martinez 1994). Common in the coastal region are procyonidae such as pisote (coatimundi, *Nasua narica),* mapache (raccoon, *Procyon lotor*), and marsupials such as tacuazin (opossum; *Didelphis marsupialis*). Also found in the region are many rodent species including tepescuintle (*Agouti paca*), and reptiles such as mud turtles and iguanas. Herbivores include deer, tapir and peccary, monkeys, and the zorra gris (gray fox, *Urocyon cinereoargentus*). Felines include the jaguar and ocelot species. Anteaters and armadillos are also common fauna in the Pacific coast while the most common birds are parrots, vultures, herons, and hawks (Estrada Belli 1998:53-54).

The rivers throughout the central Pacific region provide freshwater as well as fish, shrimp, and crab resources (Estrada Belli 1998:54). The mangrove forests and brackish coastal waters of the estuaries host species such as caimans and water birds such as cormorants, cranes, and spoonbilled birds. Mollusks, crustaceans, and sea fish are also abundant (Arroyo 1994; Coe and Flannery 1964, 1967; Estrada Belli 1998) .

Vegetation

In the past, the central Pacific region was covered by natural vegetation, but much has been eliminated or transformed by extensive human utilization (Chinchilla Mazariegos 1996:57). During the seventeenth-century Fuentes y Guzmán (1932: Vol. II, bk. 2, ch. 3,4, pp. 81-89) , described the region as being covered by tall tropical forests. Much of this vegetation has been lost as a result of cattle ranching and maize farming, and only spotty remains of the original trees are seen on cattle ranches and along rivers. However, several discernible types of vegetation are still partially visible. These reflect the distribution of different

vegetal species that are accommodated to the soils and rainfall variation through the central Pacific region's landscape.

The *bocacosta* is a tropical evergreen forest with distinct canopy and tier structure (Paull 1976:42-49). It is covered by remnants of monsoon rain forests consisting of tall tree species such as White Tree (Palo Blanco or Palo de Cortes *Roseodendron donnelsmithii*]), Santa Maria (*Callophylum brasilense*), Ceiba (*Ceiba pentandra*), Cedro (*Cedrela mexicana*), Ujuxte or Ramon (*Brosimum alicastrum*), Escquisuchil (*Burreira Huanita*), guayabo (*Terminalia Amazonia*), mahogany (Switenia), Spanish cedar (*Cedrela*), and Cacao *(Theobroma cacao)* (Estrada Belli 1998:52; Standley and Steyermark 1946).

The coastal plain zone overlaps the area between savanna and riverine forests, and alternates between deciduous and scrub forests (West 1964:379) . The terrain is covered by thorny trees such as the Morro or Jicaro (*Crescentia cujete* and *Crescentia alala*), Guayacan (*Guaiacum sanctum*), Nance (*Byrsonima*), Huiscoyol (*Coyol espmosa*). Palms such as Corozo (*Orbigyna cohune*), and Guano (*Sabal mexicana*) are also dominant. Also growing in the area are large trees such as mahogany (*Switenia*), Ceiba (*Ceiba pentandra*), Amate (*Ficus* sp), the Palo de Jiote (*Bursera simaruba*), a coastal variety of Copal, Gumbolimbo, *Protium copal* (*Burseraceae*), Zapote (*Pauteria sapota*), and the Conacaste (*Enterolobium cyclocarpum*) (Estrada Belli 1998:52-53; Standley and Steyermark 1946).

Mangrove forests are the natural vegetation of the coastal estuary zone. Red (*Rhizophora*), black (*Avicennia*), white (*Laguncularia*), and buttonwood (*Conocarpus*) are the dominant mangrove tree species (Standley and Steyermark 1946). These alternate between fan and Corozo palms (*Orbygnia cohune*) (McBryde 1971: map 7), and tall grasses, locally called *Tule* in the Nahuatl language (Estrada Belli 1998:53).

<u>*Hydrology*</u>

The central Pacific region is crossed by several streams and rivers bordered by heavy forest galleries that descend parallel from the volcanic mountain chain to the Pacific Ocean (McBryde 1971:5). Rivers are joined in four hydrological basins (see INSIVUMEH 2003a). The Madre Vieja basin has an area of 1,007 km^2 and 35.5 m^3/s of water flow average, whose capacity for superficial water accessibility is classified as median. The Coyolate basin also has medium superficial water accessibility with an area of 1,648 km^2 and 60.3 m^3/s of water flow average. The Acomé basin has an area of 706 km^2 and 31.3 m^3/s of water flow average and is also classified as a basin with medium superficial water accessibility. The Achiguate basin (1,291 km^2 and 26.5 m^3/s of water caudal average) has low superficial water accessibility. The four basins provide moderate to large quantities of fresh water that are available from the upper reaches of streams during the wet season (May through October), and small to moderate quantities of water are available from November through April during the dry season (INSIVUMEH and US Army Corps of Engineers 2000: fig. c-1, pp. 16).

The water level, river length, and land slope of the hydrological basins generate good or bad drainage terrains. Good drainage terrains are those located through the *bocacosta* and the upper coastal plain zones (Simmons, *et al.* 1959). These are the areas of most intensive agricultural productivity in the region. In contrast, the terrains with bad drainage are located in the lowest altitudinal zone, close to the river deltas, like those found in the lower coastal plain zone (Paull 1976; Simmons, *et al.* 1959). Flooding occurs during the rainy season and water is retained for long durations causing soils to be extremely humid with mid-range agricultural productivity.

<u>*Soils*</u>

The volcanic *cordillera*s provide fertile alluvial soils to the coastal plain (Stevens 1964: fig. 8, pp. 308) . These soils are composed of basalt, silt, and loam that are generally yellowish to dark brown and black in color (McBryde 1971:132). These soils are classified by their depth, drainage, and origin, and divided into Pacific slope soils, Pacific shore line soils, and Miscellaneous soils (Simmons, *et al.* 1959:313-314).

The Pacific Slope Soils are located on volcanic alluviums (Simmons, *et al.* 1959:314), which cover 30.91% of the regional soils. Their depth depends on the slope degree and terrain topography. The general slope of the terrain is sufficient to generate good hydrological drainage, providing the necessary humidity required by tall forest coverings and agricultural crops in the area (see Simmons, *et al.* 1959:317-324). The subsoils consist of reddish loam over alluvial materials, derived from pumiceous and ashy volcanic parent material (Chinchilla Mazariegos 1996:56). The superficial soils are reddish-sandy clays of fine and medium grains (Simmons, *et al.* 1959:317-324).

Pacific Littoral Soils, covering the 65.45% of the soils of the region, are found in the lower *bocacosta* zone and in the coastal plain zone (Simmons, *et al.* 1959:314). Soils are formed by volcanic alluvium; however, in the coastal plain they have more sand than those of the lower *bocacosta*. In general, the Pacific Littoral Soils are extremely good for extensive and intensive agricultural activities (see Simmons, *et al.* 1959:317-324). The only exceptions are those in the lower coastal plain found near the lower river basin system. In this area the hydrological drainage is insufficient because of the flat terrain (Paull 1976). During the rainy season soils are humid which reduces agricultural potential (Paull 1976:49-50) but become cultivable during the dry season (Chinchilla Mazariegos 1996:56).

The Miscellaneous soils are comprised of sand and volcanic materials but have poor agricultural utility (Simmons, *et al.* 1959). Only 0.53% of the soils in the region are Miscellaneous soils (Simmons, et al. 1959:314), and these are found on the volcanic cones and near the seashore (Simmons, *et al.* 1959: fig. 40, pp 315).

Sixteenth-Century Tribute Crops

The historian Francis Polo Sifontes (Sifontes 1989:263) has described the central coast region as one of the most fertile regions in Guatemala, both past and present. In early colonial documents, the most complete descriptions of natural resources in the area are found in *Recordación Florida o Historia del Reyno de Goathemala* written in 1690 by Fuentes y Guzmán, and in *Tasaciones de tributos* written between 1549-1554 by Alonso López de Cerrato and his *oidores* (associate justices) Pedro Ramírez de Quiñónez, and Juan Rogel[39]. Although, these documents are about the post-Conquest economy and crop productions, they are useful for understanding similar patterns that were present in pre-Conquest periods (Chinchilla Mazariegos 1996:56; Orellana 1995).

Immediately after the conquest, there was a much greater emphasis on growing cash crop products rather than subsistence crops (Orellana 1995:98). Perishable items without cash crop value were considered unimportant and not included in reports or given as tribute. Major crops that were reported by early colonial assessors included items such as cacao, maize, and salt. Also included

39 *Tasaciones de tributos* is considered to be an important document for understanding the economy and demography in the early years after the Spanish Conquest in Central America (Carmack 1973; Fowler 1989b:26-27). Later (1571-1574), this document was used by the cosmographer and chronicler Juan López de Velasco to write his *Geografía y descripción universal de las indias* (Carmack 1973; Fowler 1989b:27).

were cotton, fish, fruits, honey, medicinal herbs, and spices. The following is a description of the major crops reported by early colonial tribute-paying towns.

Cacao

The b*ocacosta* region was one of the major cacao producing areas immediately before and after the time of conquest (Bergmann 1969). This "cacao belt" region[40], as referred to by MacBryde (1971: map 11) , has the optimal temperate environment - with humid climate, well-drained deep soils, and water supply - required to grow and harvest cacao (Chinchilla Mazariegos 1996:61; 2005b; Gomez-Pompa, *et al.* 1990).

In 1570, Diego de Garcés (in Orellana 1984:133) wrote that coastal inhabitants who owned cacao-producing lands bought and spent more than those who did not. Later, similar observations were made by Fuentes y Guzman (Fuentes y Guzmán 1932: Vol. 2, bk. 1, ch. 11, pp. 66), who noticed that coastal inhabitants, depended on their cacao grovers because of the enormous benefits they received.

Towns such as Asunción Popocatepeque, Escuintla, Magdalena Malacatepeque, San Andrés Ichanosuma, San Cristóbal Cosamaloapan, San Francisco Ichanhuëhuë, San Juan Alotepeque, Santa Catarina Siquinalá, Santa Lucia Cosamaloapan, and Santiago Cosamaloapan are listed as towns that paid

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40 The Mesoamerican south Pacific coast piedmont areas with intensive cacao production, either during pre-Hispanic or colonial periods, were Soconusco in the southeastern Pacific coast of Chiapas, Mexico, Suchitepéquez in the central pacific coast of Guatemala, and Izalco in southwestern side of El Salvador (Chinchilla Mazariegos 2005b; Fowler 1989a; Gasco 1989; Orellana 1995; Voorhies and Gasco 2004). Other Cacao areas in Mesoamerica included: 1) the Chontalpa, Quauhtochco, and Tuxpan in the Gulf of Mexico, 2) Lacandon territory in Chiapas Mexico, 3) Cihuatlán and Colima in the northern side of the Pacific coast of Mexico, 4) Guazacapan (Pacific coast), Chiquimula (eastern highland), and Izabal in Guatemala, 5) Sula Valley and Guanaja in Honduras, and 6) the Sibun River Valley in southern Belize (Bergmann 1969; Chinchilla Mazariegos 2005b; Fowler 1993; Gasco 1987; McAnany, *et al.* 2002; Scholes and Roys 1948; Voorhies and Gasco 2004; Young 1994). Cacao was a widely cultivated crop throughout Mesoamerica but the major areas of production were the Tabasco and the Pacific coast piedmont regions, from Soconusco to Izalco.

cacao tribute in the *bocacosta* zone. At the end of the seventeenth-century, towns such as San Pedro Aguacatepeque, San Sebastián Chiagüites, and Santo Domingo Sinacamecayo were also included in cacao tribute assessments (Crespo 1935:10-11).

Although the amount of cacao from those central *bocacosta* towns was not as great as that from Suchitepequéz[41], Soconusco, Mexico, or Izalco, El Salvador, the cacao produced in the central *bocacosta* zone was famous in quality. Fuentes y Guzmán, for example, wrote that the town of Santiago Cotzumalguapa had good cacao groves. Santa Lucia grew a special type of cacao known to the entire kingdom, and Santo Domingo Sinacamecayo also had fine quality cacao, "*the most delicious for making chocolate*" (Fuentes y Guzmán 1932:Vol. 2, bk. 2, ch. 2, p. 79).

Throughout the coastal plain zone, Miguatlán, San Francisco Texcuaco, San Luis Masagua, San Miguel Tehuantepec, Santa Ana Mixtán, and Utanzingo are recorded as cacao tribute-paying towns in the sixteenth-century (Orellana 1995:99). Cacao towns registered in the shoreline zone include: Amayuca, Cacaoatlán, and Iztapa.

<u>*Vanilla and Annatto*</u>

Where cacao grew, vanilla and annatto (*achiote*) also grew (Caso Barrera 2002; Caso Barrera and Aliphat 2006) . Cacao requires the presence of shade trees named *Madre cacao* (mother-of-cacao *Gliricidia sepium*), which also provide support for the vines of vanilla that was generally planted at the foot of this tree (Fuentes y Guzmán 1932: Vol. 2, bk. 2, ch. 8, p. 100; Orellana 1995:98)

41 In *Tasaciones de tributos* (1549-1554), the Suchitepéquez region, with twenty-six towns recorded, was assessed to pay 5,585 *xiquipiles* of cacao (one xiquipil weigh about 16.66 libs and contains 8000 cacao beans (MacLeod 1973:70)). In contrast, the central Pacific region, with thirteen towns recorded, were said to pay a total amount of 1,080 *xiquipiles* (Bergmann 1969:91-92; Feldman 1980:41-45) .

. Another crop cultivated close to cacao trees is the *achiote* (annatto) or *Bixa orellana* (Caso Barrera 2002; Caso Barrera and Aliphat 2006).

The three crops, cacao, vanilla, and *achiote*, were complementary crops for the indigenous diet. The demand on vanilla and *achiote* made them cash crops for the Spaniards, who added them as staples on which tribute was paid in both the *bocacosta* and coastal plain towns in the early sixteenth century (Orellana 1995).

<u>*Maize*</u>

Three maize crops during the year were recorded throughout the central Pacific coast region (Fuentes y Guzmán 1932: Vol. 2, bk. 2, ch. 2, p. 78; Juarros 1936:24; McBryde 1971:18). In the late seventeenth-century, Fuentes y Guzman (1932: Vol. 2, bk. 2, ch. 2, p. 78) describes the coast *"... lleva por sustracidad tres frutos al año, en lo que llaman sementera de temporal*[42]*, que dicen tonalmilli. chagüite*[43] *y regadío"*. The first maize crop grew during March or April (when the rainfall is more intense) and was harvested during the *canícula* period (late August or early September). The second maize crop grew between August and September and was harvested in February. The final maize crop, made in terrain with bad drainage, or swampy soils[44], was harvested throughout the year. For the early part of the twentieth-century, McBryde (1971:18) recorded a similar pattern.

Although maize was produced three times per year, it was not as high

42 *Sementera* is the term for the sowing season (from January to April) or can refer to a field already sown. In the Nahuatl language, sowing is referring to as *tonalmilli*.

43 The word *chagüite* refers to swampy areas (Chinchilla Mazariegos 1996:60).

44 Correlating sixteenth-century Fuentes y Guzman's *"sementera de temporal"*, *"regadio"*, and *"chagüite"* crop systems and McBryde's (1971) twenty-century descriptions, Chinchilla (1996:60) states that maize agriculture shows a high degree of continuity in the central coastal region.

quality[45] or profitable as crops such as cacao. In 1525, Juan de Pineda (1594:333-334) recorded that the Indians from the town of Escuintla did not work directly in their maize fields themselves because they devoted their time to taking care of cacao. Instead, Pineda added, they rent their land to the highland people, who came to the coast to work on maize fields in order to pay their tribute and supply the town of Escuintla with maize.

Due to the emphasis on cacao production, maize is described as being scarce throughout the central coast region. Vazquez de Herrera (1944:55-57) wrote that towns such as Santiago Cosamaloapan, San Francisco Ichanhuëhuë, San Andrés Ichanosuma, Santa Lucia Cosamaloapan, San Cristóbal Cosamaloapan, Santo Domingo Sinacamecayo, and Siquinalá had little maize as a result of the emphasis on cacao. However, in towns such as Alotenango and Aguacatepeque, which did not have cacao lands, much maize was harvested (Vásquez de Herrera 1944:55-57).

Salt

Salt was an important harvest product in towns of the shoreline zone and surrounding area. Iztapa, Otlacingo, Xicalapa, and Texcuaco were also recorded as towns where salt was harvested (Estrada and Niebla 1955; Fuentes y Guzmán 1932: Vol. 2, bk. 2, ch. 10, p. 104; García de Palacio 1587). The indigenous salt-harvesting process was recorded as follows: 1) marsh soil was placed in large canoes, 2) estuary water was filtered through it, 3) after filtering, the results were cooked in large ceramic pots to obtain the salt (Andrews 1980:172).

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45 Fuentes y Guzmán and McBryde agreed that coastal maize quality made it less durable than the maize of the highland, which can be preserved for over a year (Chinchilla Mazariegos 1996:60).

Other Crops

Other tribute crops were cotton, which was said to be a good economical crop for coastal inhabitants (Fuentes y Guzmán 1932:Vol. 2, bk. 1, ch. 11, pp. 66). Coastal people also harvested several varieties of staple crops. Among these were beans, chilis, fruits, and honey. Fish were also caught throughout the rivers and estuaries. Tribute was paid on all staple crops and resources (Chinchilla Mazariegos 1996:62; Fuentes y Guzmán 1932: Vol. 2, bk. 1, ch. 11, p. 66; Orellana 1995:98; Pineda 1982:333-334). A variety of medicinal herbs, as well as medium and small game animals were also known in the region (Fuentes y Guzmán 1932: Vol. 2, bk. 2, ch. 4, p. 85-89).

Summary

On a large scale, the central Pacific coast ecosystems seem homogeneous. However, differences in terrain, altitude, topography, soil types, rainfall rates, and vegetation coverage allow several distinct microecological zones to emerge, providing diverse resources. The upper *bocacosta* zone has good hydrological drainage. Its fertile soils are home to abundant forest vegetation. In the lower *bocacosta*, dry alluvial fans with well drained sandy soils and alternating forest and savanna vegetations characterized the zone. The third zone is the coastal plain where silty alluvial clay, deep soils, savanna vegetation, and tall trees distinguish the area. The estuary zone is characterized by bad drainage. Great varieties of biotic species are present in the four geographic zones. The distinctiveness of the central Pacific coast is its temperate climate and rich eco-system with many important resources, which were crucial for human settlement as well as resource-based economies.

Reports on the post-Conquest economy were recorded by Spanish

chroniclers and officials in Guatemala during the mid-sixteenth century. These accounts are useful for understanding pre-Conquest economy along the central Pacific coast. Cash crops became more common after the Spanish began to settle in the region and numerous tribute-paying towns reflect the Spanish focus on valuable crops such as cacao, vanilla (*bocacosta*), cotton (coastal plain) and salt (estuary and shoreline). Crops such as maize were de-emphasized because they were less valuable. One of the most valuable and desired crops of the region was cacao.

Cacao was grown in all four geographic zones. During the seventeenth-century a special type of cacao was grown in the *bocacosta* region and considered to make the best chocolate beverages. It was known throughout the entire kingdom of Guatemala. The Spanish also demanded tribute on stable crops such as vanilla and *achiote.* Maize was a staple crop that was de-emphasized as it was less cash producing. It was recorded that indigenous landowners even decreased their production of this important resource, in favor of cacao.

CHAPTER VI.
SITE PLAN AND SETTLEMENT CHARACTERISTICS

The present chapter, first, describes site plan characteristic such as geographic location, terrain, number of mounds, and preservation. Then, an analysis based on sites plan characteristics, rank, physiographic domain, and site distances are discussed. It is in order to give details about the similarity or dissimilarity between sites, as well as the characteristic presented by all the settlements through the south Pacific coast geography.

Sites Description

Fred Bove based on ethnohistoric records and their association with the Ixtacapa phase ceramic complex identified eleven settlements from the Late Postclassic period. From then, only eight sites, Carolina, Esperanza, El Jute, Gomera, Nuevo Mundo, Las Playas, and Pajuil, were archeological investigated and was possible to make their topographic maps. In contrast, due to the ability to obtain permission from landowners, formal survey, and mapping were not possible at Costa Rica, Caulote, and Yolanda sites. Fortunately, these sites were sketch-mapped by Fred Bove during earlier surveys and these data are included in the following descriptions. In addition, the data on Izcuintepeque site is derived from ethnohistorical documents alone.

Pajuil

Pajuil is located at 14° 1' 30.737" N Latitude and 91° 4' 11.907" W

Longitude (UTM 15N 708440.45E, 1551270.71N) and 13 meters above sea level (m.a.s.l). It was discovered in 1982-1983 and sketch mapped in 2000 by Fred Bove (Bove, *et al.* 2004). Today, the terrain is used for cattle ranching and banana plantations. Many mounds have been destroyed as a result, but the central mound group is well preserved. The Pajuil site covers 16.06 hectares of relatively flat terrain. The slope is 0.55% and rises to the west near an area of flooding. In this area, a *bajo* or catch basin accumulates water that flows in. Two more *bajos* are found to the northeast and east respectively (see Figure 18).

Throughout the terrain, Pajuil's thirty-six earth mounds are clustered into three major groupings (Figure 19). Twenty-one lower mounds (0.10 - 0.20 m) are found on the north side. In this area, the mounds are scattered along an irregular north-south grid alignment. In the east, seven taller mounds (0.20-1.10 m), form a formal west-opening rectangular plaza with a central mound (1.10 m). A cluster of eight mounds (0.20-1.30 m) is located in the southern portion of the site. This mound group is characterized by a large mound (1.30 m) to the west.

Carolina

The site of Carolina was discovered in 1979 by Frederick Bove, who in 1982 conducted the first archaeological work at the site (Bove 2002). Geographically, the Carolina site located at 14° 4' 0.705" N Latitude and 91° 3' 24.191" W Longitude (UTM 15N 709834.55E, 1555890.76N) at an altitude of 15 m.a.s.l. All mounds are found on the Carolina farm, from where the site's name was taken. Earlier, cotton and bananas were the major crops grown, but today the major uses of the land are cattle ranching and sugarcane fields. These activities have caused the partial deterioration of several mounds. Additionally, the construction of a landing strip close to the site's main plaza has completely obliterated several

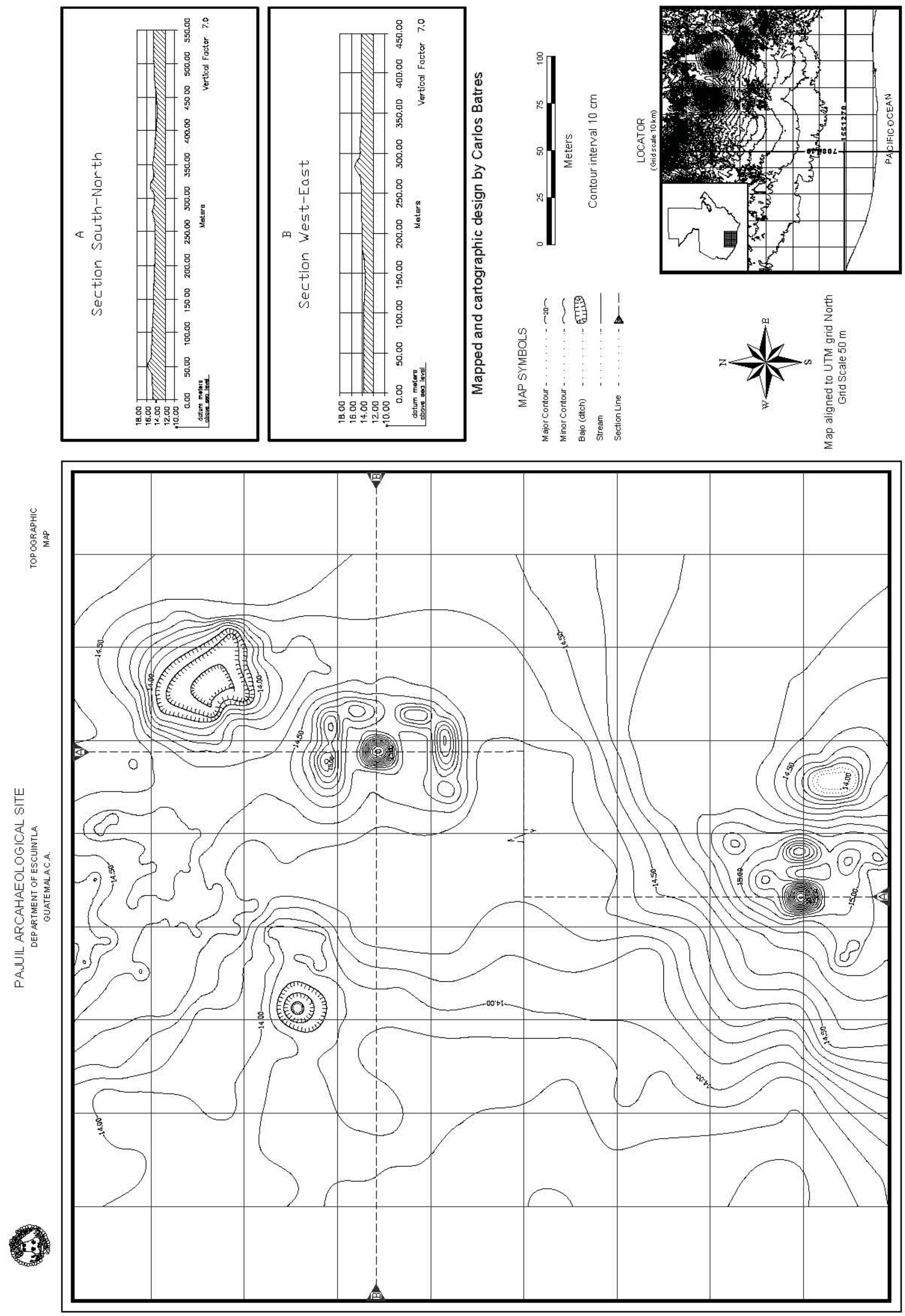


Figure 18: Pajuil Topographic Map

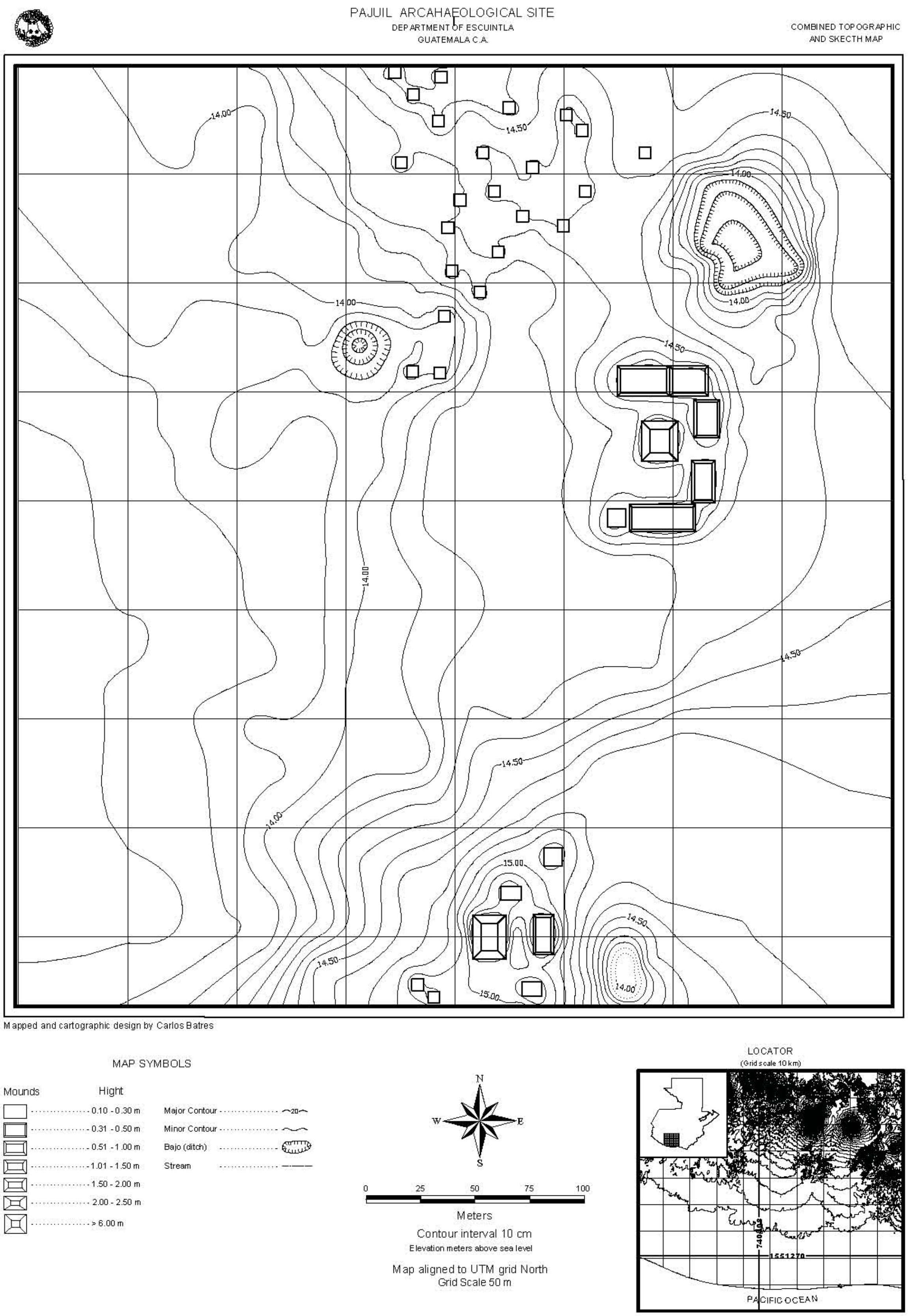


Figure 19: Pajuil Sketch and Topographic Map

others. The initial report of the site recorded eighty-seven earth mounds, but in 2003-2004 only sixty-five remained.

The Carolina site covers 23.34 hectares of flat terrain. A slope of 1.62% descends smoothly to the southwest. The *Zanjón San Pedro* is a large seasonal river that passes through the site (see Figure 20).

The site is divided by the *Zanjón San Pedro* (see Figure 21). The southeastern area consists of thirty-eight earth mounds (0.10-8.00 m). The central portion of this group has a large rectangular plaza with two tall mounds (6 and 8 m height) or pyramids. The general arrangement is rectangular. On the west side of *Zanjón San Pedro*, thirty-five lower earth mounds (0.20 m) are characterized by an informal distribution, integrated into a larger irregular grid alignment.

<u>Esperanza</u>

The Esperanza site was discovered during a reconnaissance survey conducted by the Pipil Project in 2002 (Bove, *et al.* 2004). Geographically, the site is found at 14° 2' 52.495" N Latitude and 91° 3' 18.468" W Longitude (UTM 15N 710023.54 E, 1553796.02 N), 24 m.a.s.l. Sugarcane plantations are the major agricultural activity throughout the site's terrain. The site covers an area of 8.28 hectares with a slope of 0.46% descending to the southwest. The earth mounds are found in a heavily flooded area (see Figure 22). Both plowing and flooding activities have caused much destruction of the site. Today only twenty-three mounds (0.20-0.50m) remain of what was likely a much larger site. Although the configuration of the site was heavily damaged, the earth-mounds show clustering along an irregular north-south grid (sees Figure 23).

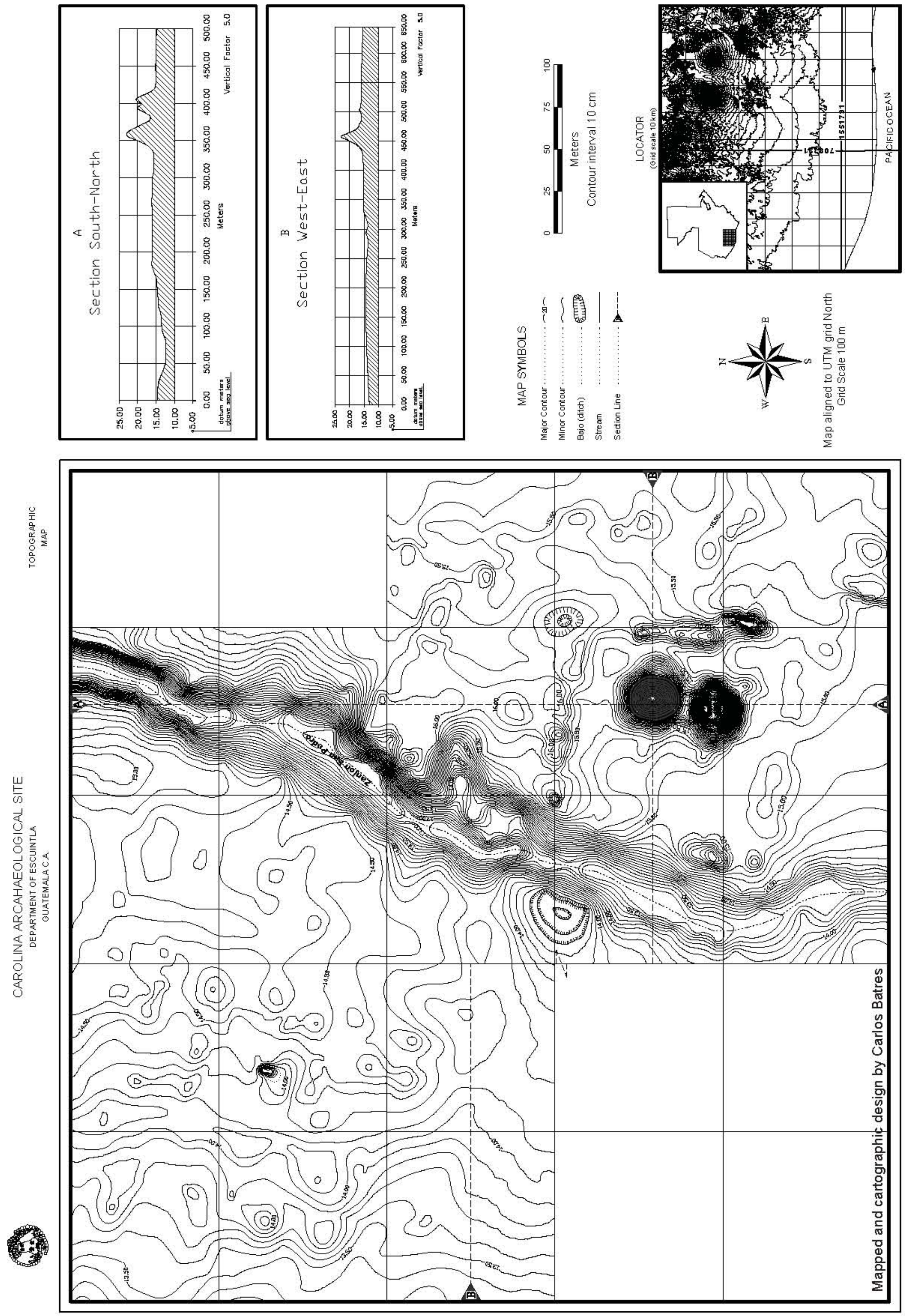


Figure 20: Carolina Topographic Map

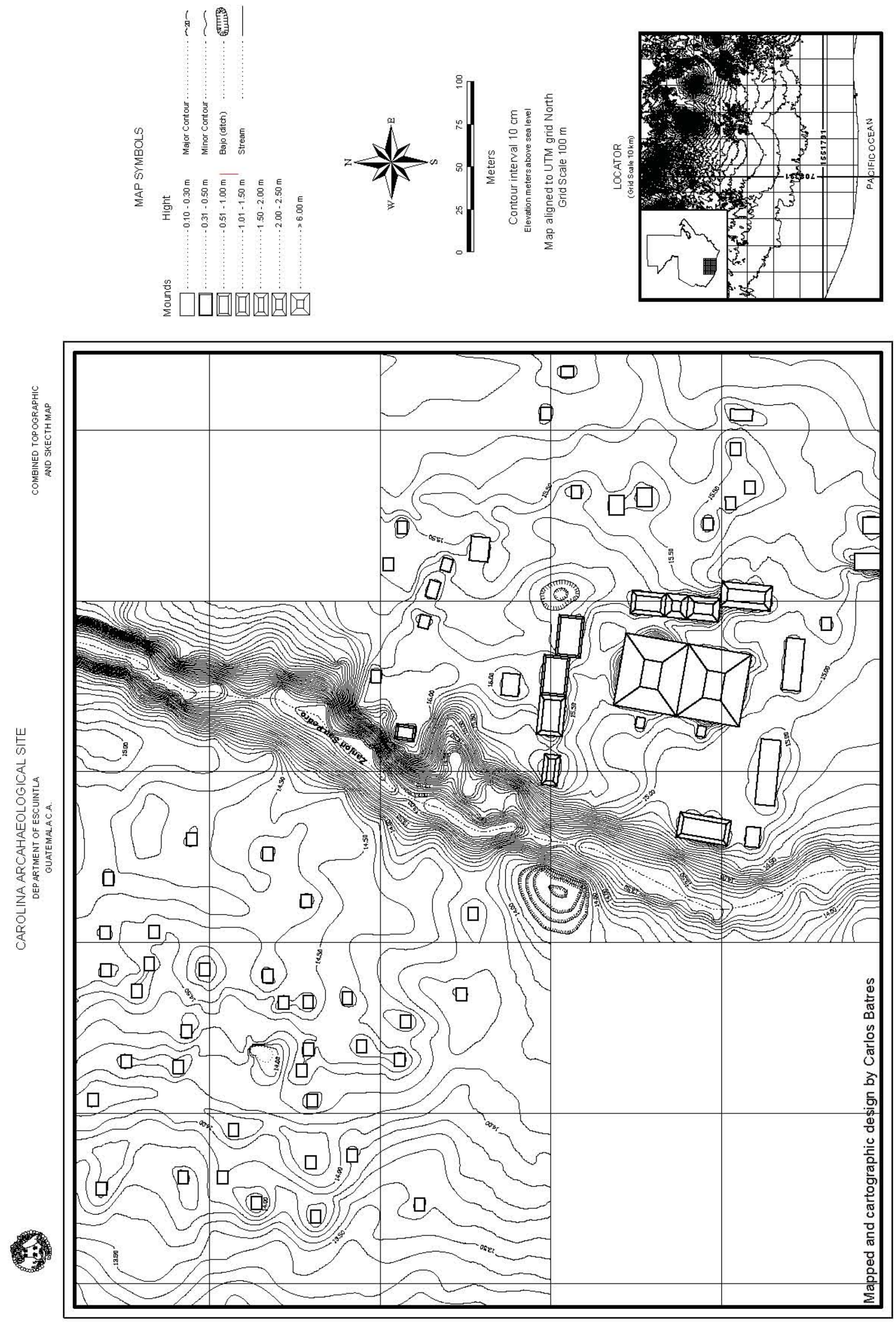


Figure 21: Carolina Sketch and Topographic Map

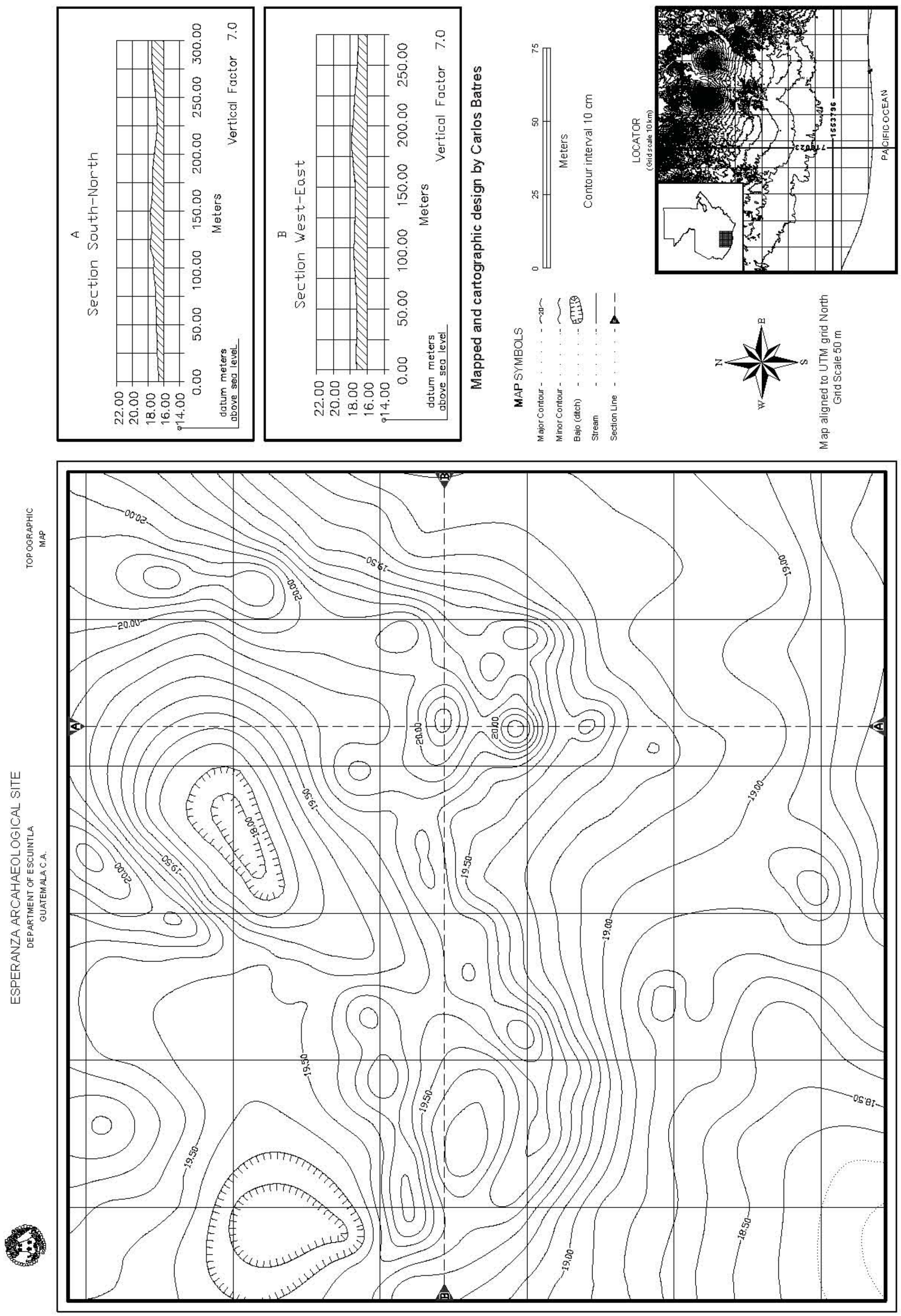


Figure 22: Esperanza Topographic Map

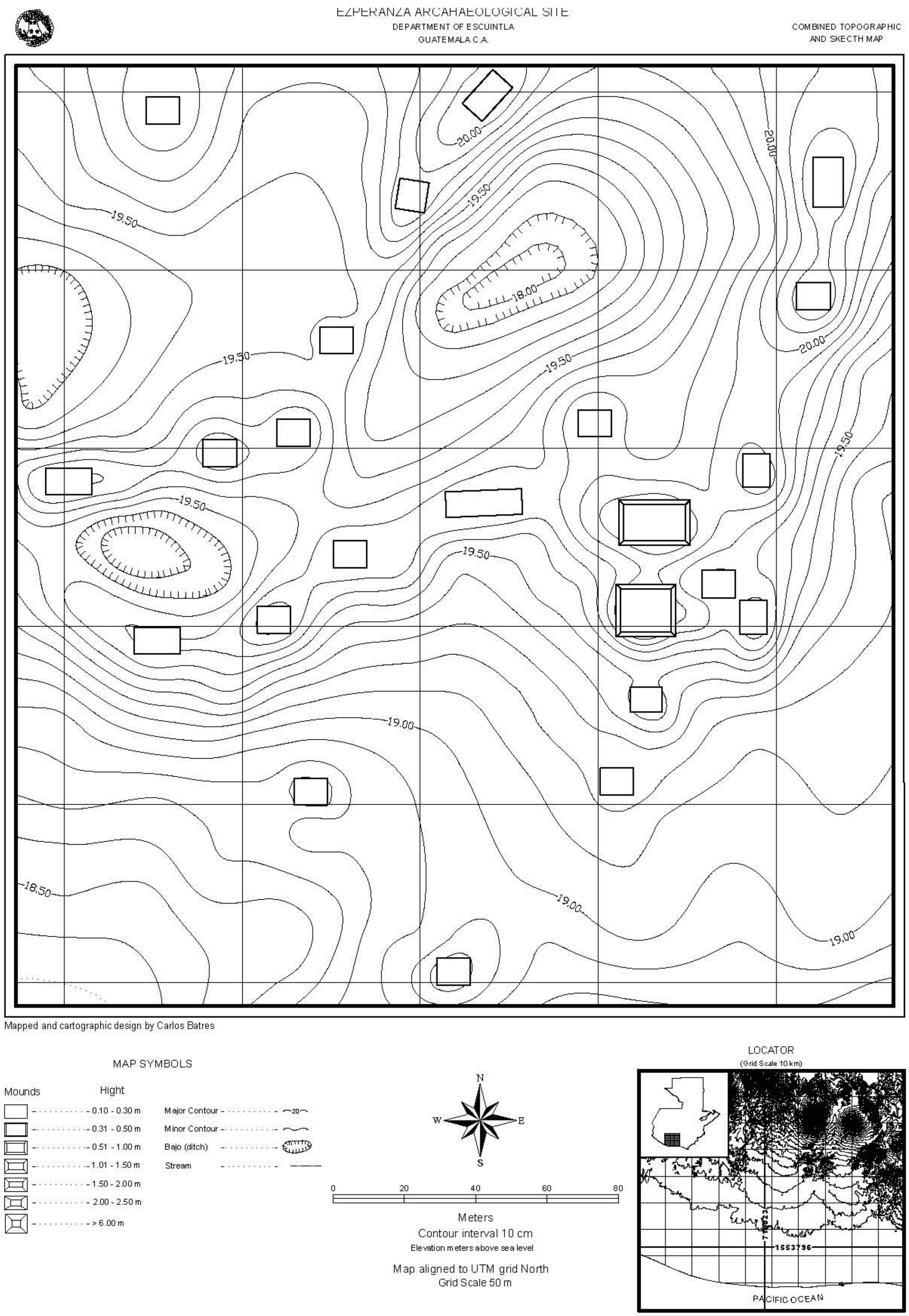


Figure 23: Esperanza Sketch and Topographic Map

Gomera

The geographic location of the Gomera site is 14° 4' 0.672" N Latitude and 91° 3' 24.191" W Longitude (UTM 15N 709834.55 E, 1555890.76 N). Its altitude is 27 m.a.s.l. The site's area is 42 hectares. The terrain is mainly flat with a slope 0.59% oriented to the south-east in line of descent. A deep *bajo* filled by northeastern and south-western seasonal streams is located in the southern portion of the site. Another small *bajo* is situated in north-west area (see Figure 24).

Gustav Eisen (1888) and Edwin Shook (1965) were the first scholars to report the existence of the site. The site was not visited although their report was included in the well known Tulane Map (Bove, *et al.* 2004) . It was not was until 2000 when the Gomera site was formally visited by Frederick Bove, who reported over seventy-nine earth mounds (0.20 - 2.40m) throughout the site.

In 2003 new research was conducted by Bove. The central area of the site had lost twenty-five mounds as a result of the construction of a horse race track, football field, and farm buildings. Due to the damage it is difficult to identify the configuration of mound clusters (see Figure 25).

Nucleated mounds in the north comprise a large rectangular plaza with a nucleated mound area (0.30 – 2.30 m). The plaza is open to the northeast with a tall mound (2.5 m) in the center. A second cluster is found directly south.

The second cluster consists of several nucleated mounds (0.2 - 1.40 m) oriented along an irregular south-north grid with two larger mounds of 1 meter in height situated in a northeasterly direction. A third group of mounds (0.20 - 0.30) with a northwesterly orientation is found to the west. In the southeast is a cluster of mounds (0.20 - 0.50 m) located to the south of a large *bajo* and seasonal stream.

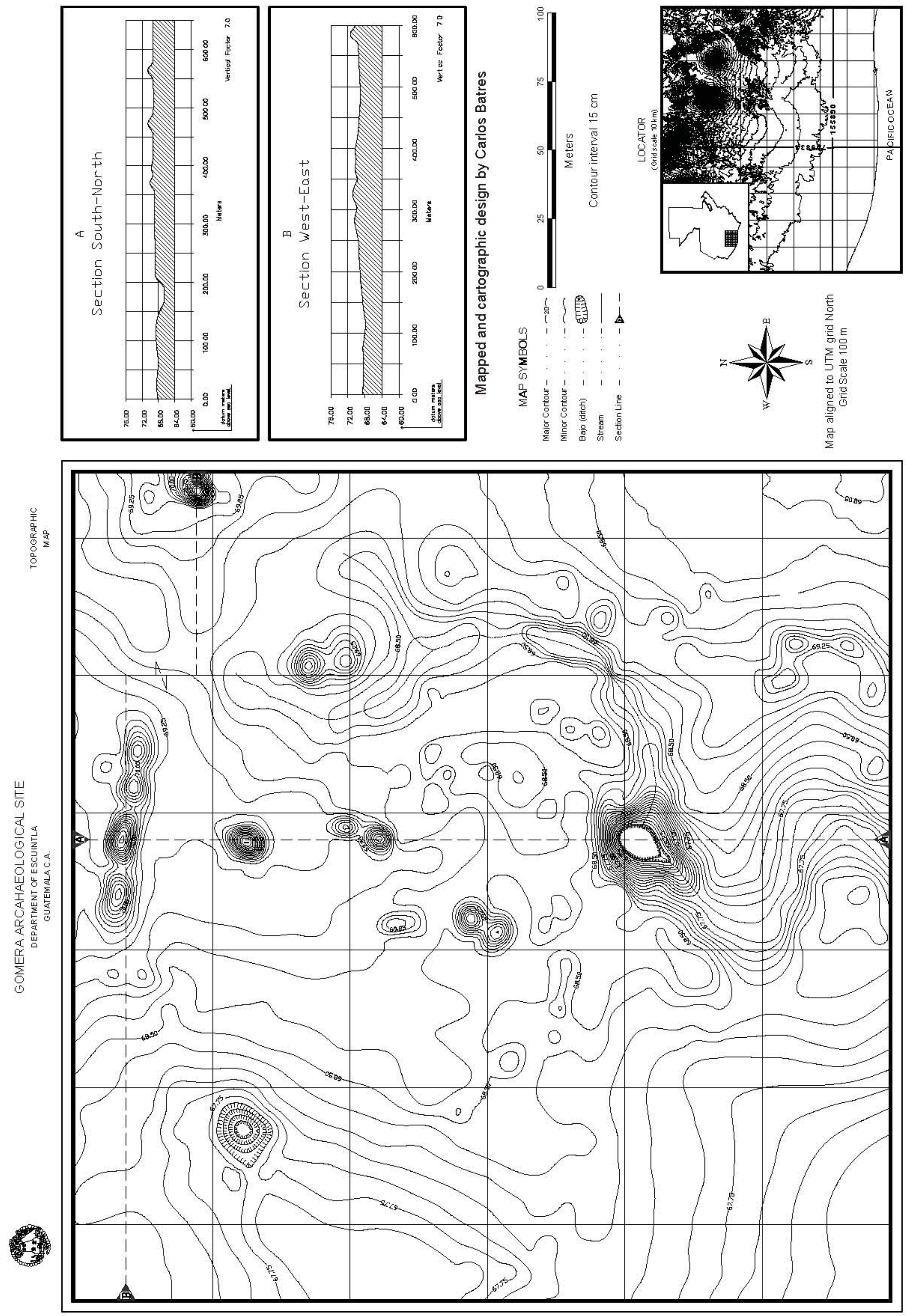


Figure 24: Gomera Topographic Map

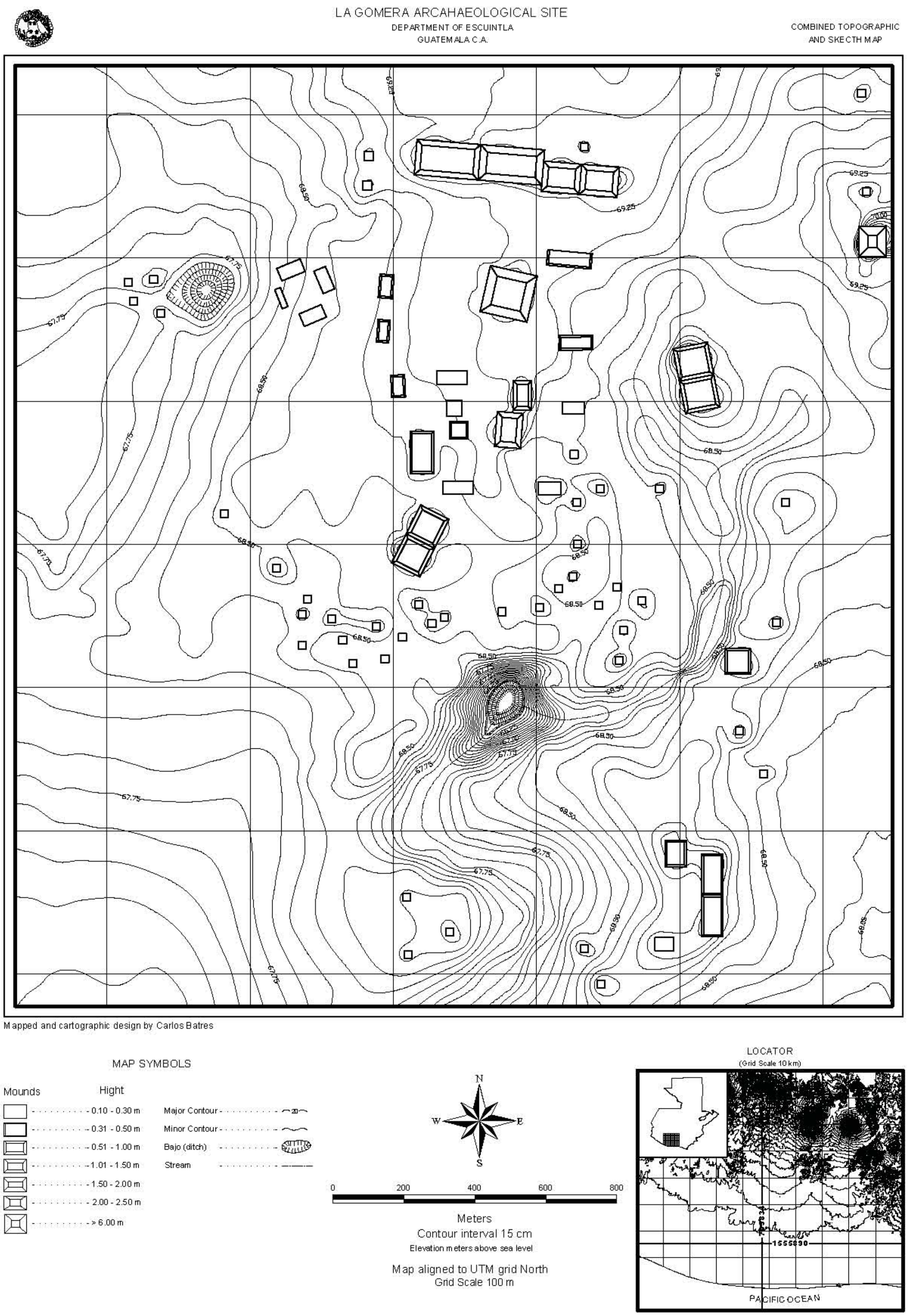


Figure 25: Gomera Sketch and Topographic Map

<u>*El Jute*</u>

The El Jute site covers 10.06 hectares of land. Geographically, the site is found at 14° 9' 32.262" N Latitude and 91° 4' 58.738" W Longitude (UTM 15N 706914.31 E, 1566058.67 N) at an altitude of 64 m.a.s.l. Today it is covered by sugarcane fields. Since it was first reported in 1989, it has been damaged by heavy plowing (Bove 2002). The slope of the terrain is 0.73% and descends to the south near a flooding area and shallow *bajo* (see Figure 26).

Nineteen earth mounds (0.20-1.50 m) are sparsely distributed with clustering to the south (see Figure 27). In the northern section are two mounds (0.30- 0.50 m). In the central portion of the site is a cluster of four mounds (0.20-0.80 m) oriented in north-south grid alignment. The major grouping in the southeast consists of nine mounds (0.20 - 1.50 m) in a circular plaza arrangement. A small shallow *bajo* is found nearby. Another insolated mound (0.20 m) is found to the west.

<u>*Las Playas*</u>

Geographically, the site of Las Playas is situated at 14° 10' 45.618" N Latitude and 91° 7' 58.089" W Longitude (UTM 15N 701517.38 E, 1568269.35 N), 75 m.a.s.l. The site covers 14.21 hectares of terrain with a slope of 0.60% descending to the southwest (see Figure 28).

Edwin Shook, Marion Hatch, and Frederick Bove discovered Las Playas in 1978 (Bove, *et al.* 2004). Today the area is used mainly for cattle ranching activities causing substantial mound deterioration. Major damage to the site is caused by the expansion of the modern town of Las Playas to the north. Originally, Las Playas consisted of thirty-seven earth mounds and one sunken *palangana* style I-shaped ball court (see Figure 29). Today, only thirty mounds, and the ball court survive.

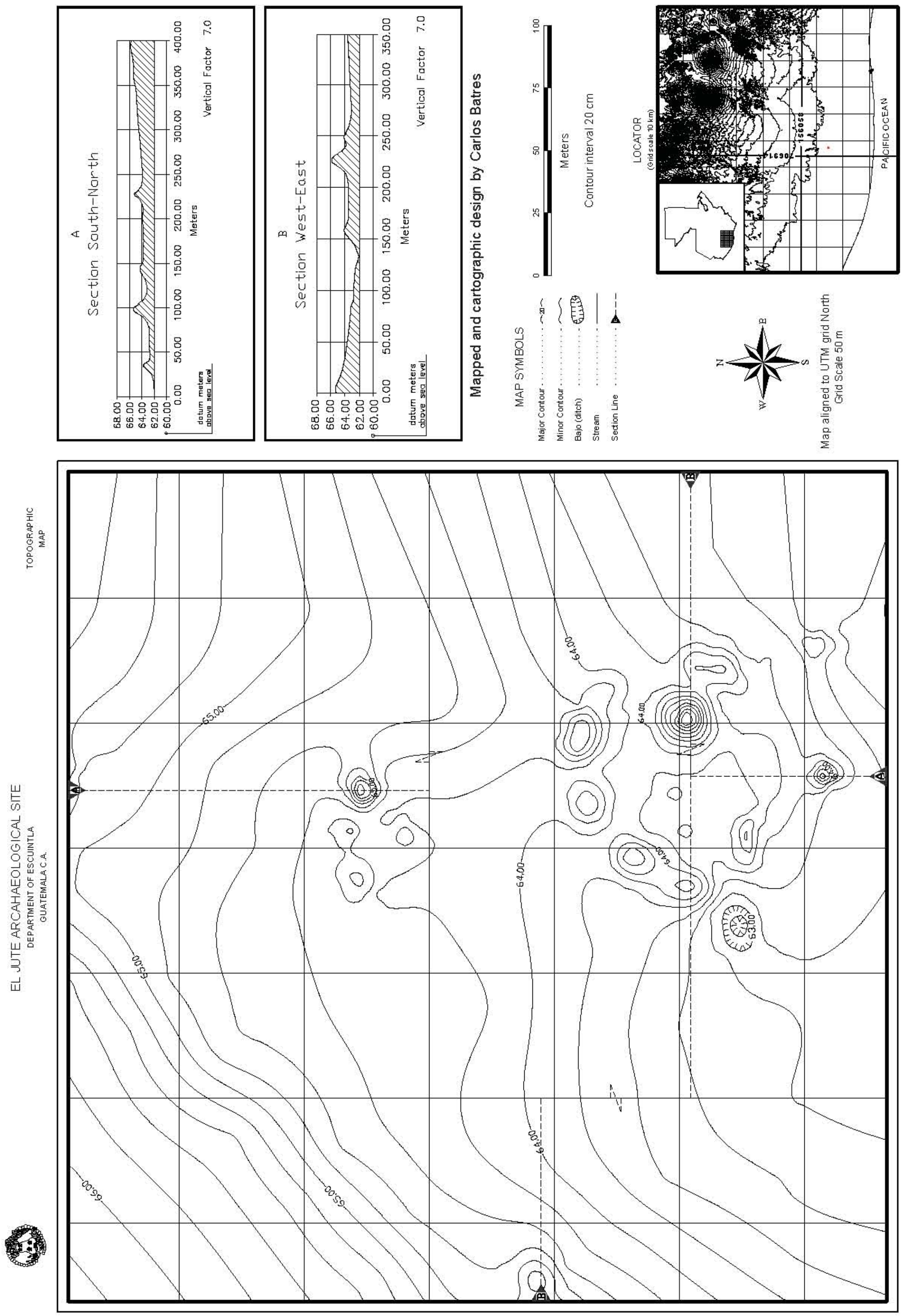


Figure 26: El Jute Topographic Map

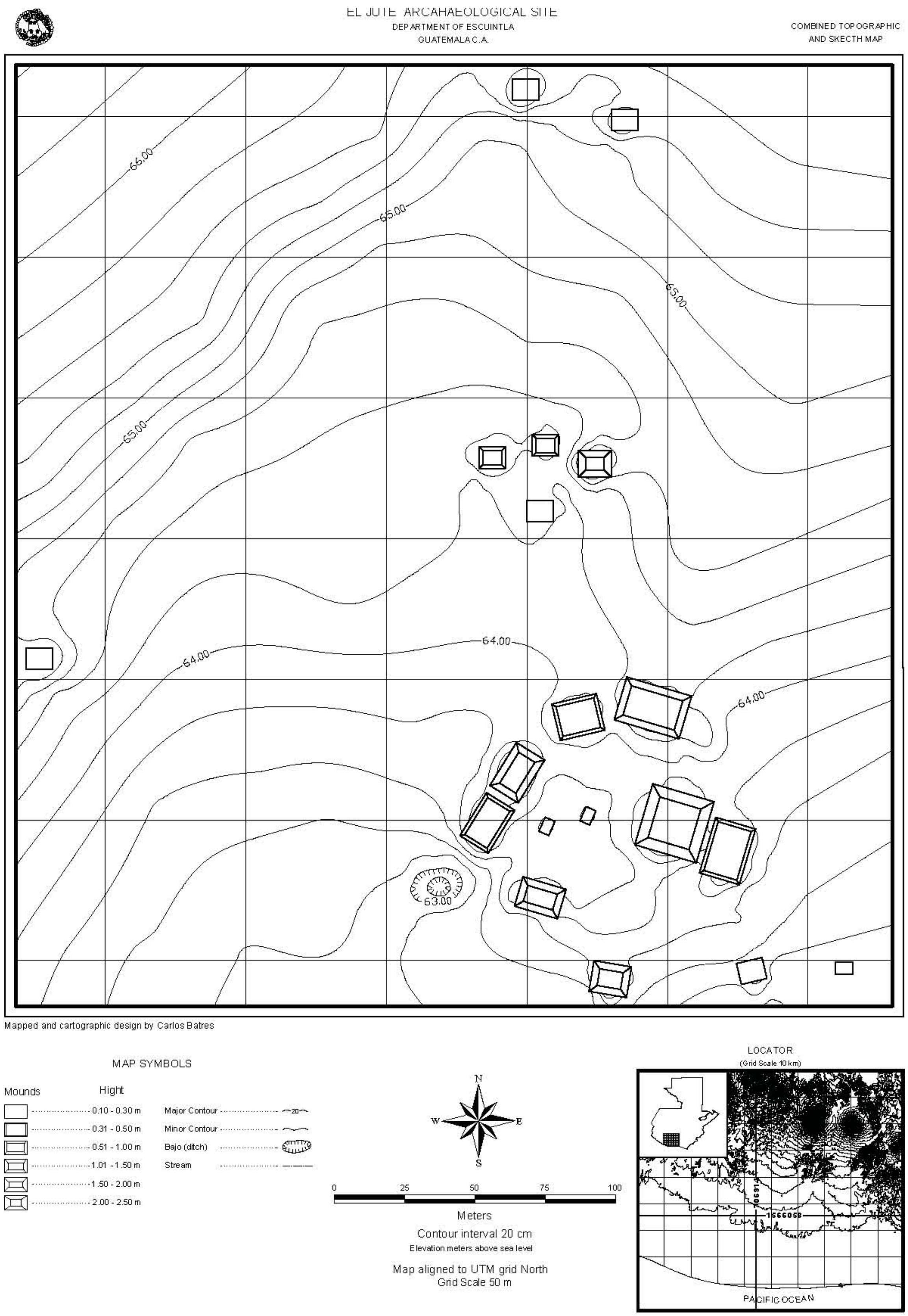


Figure 27: El Jute Sketch and Topographic Map

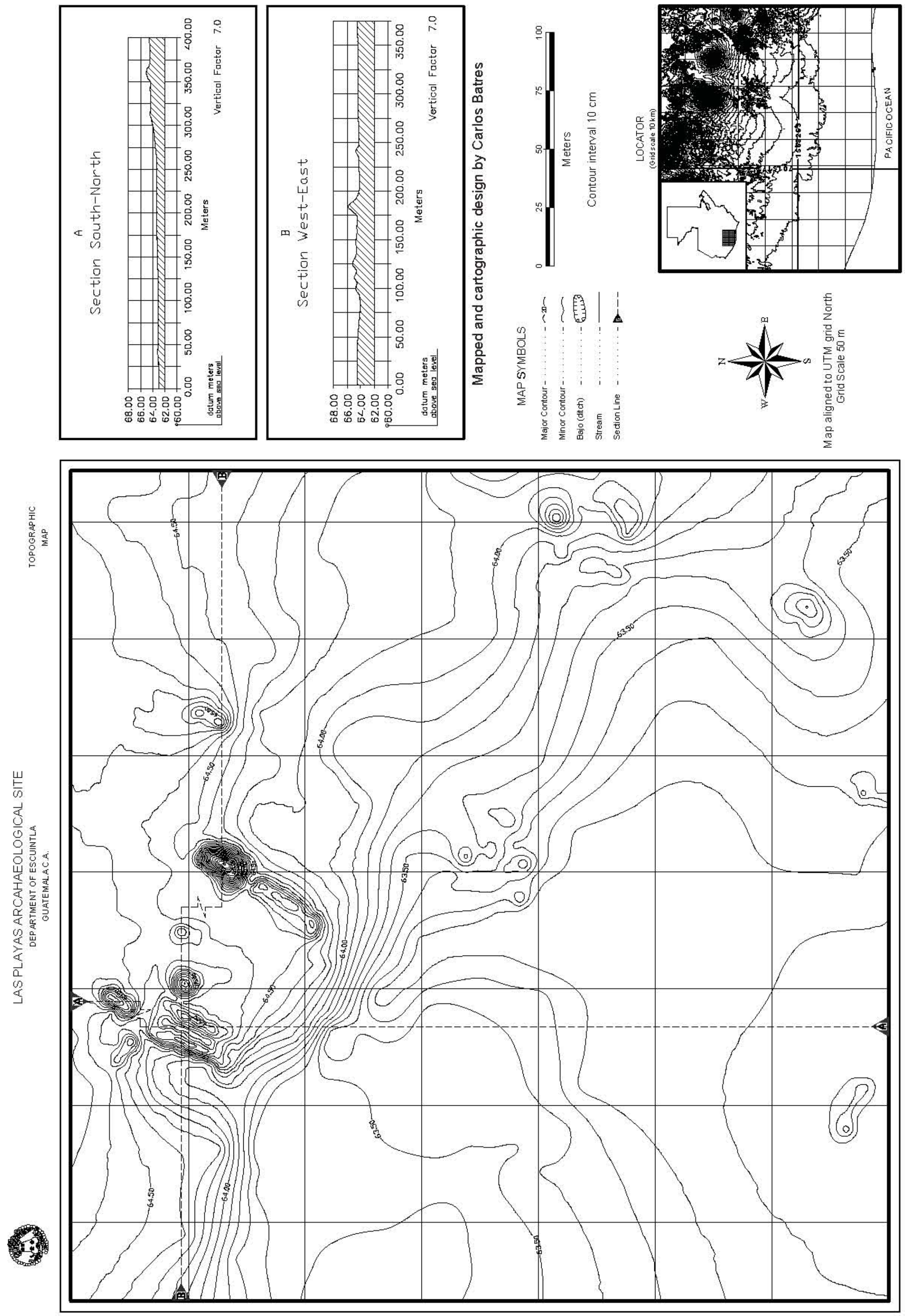


Figure 28: Las Playas Topographic Map

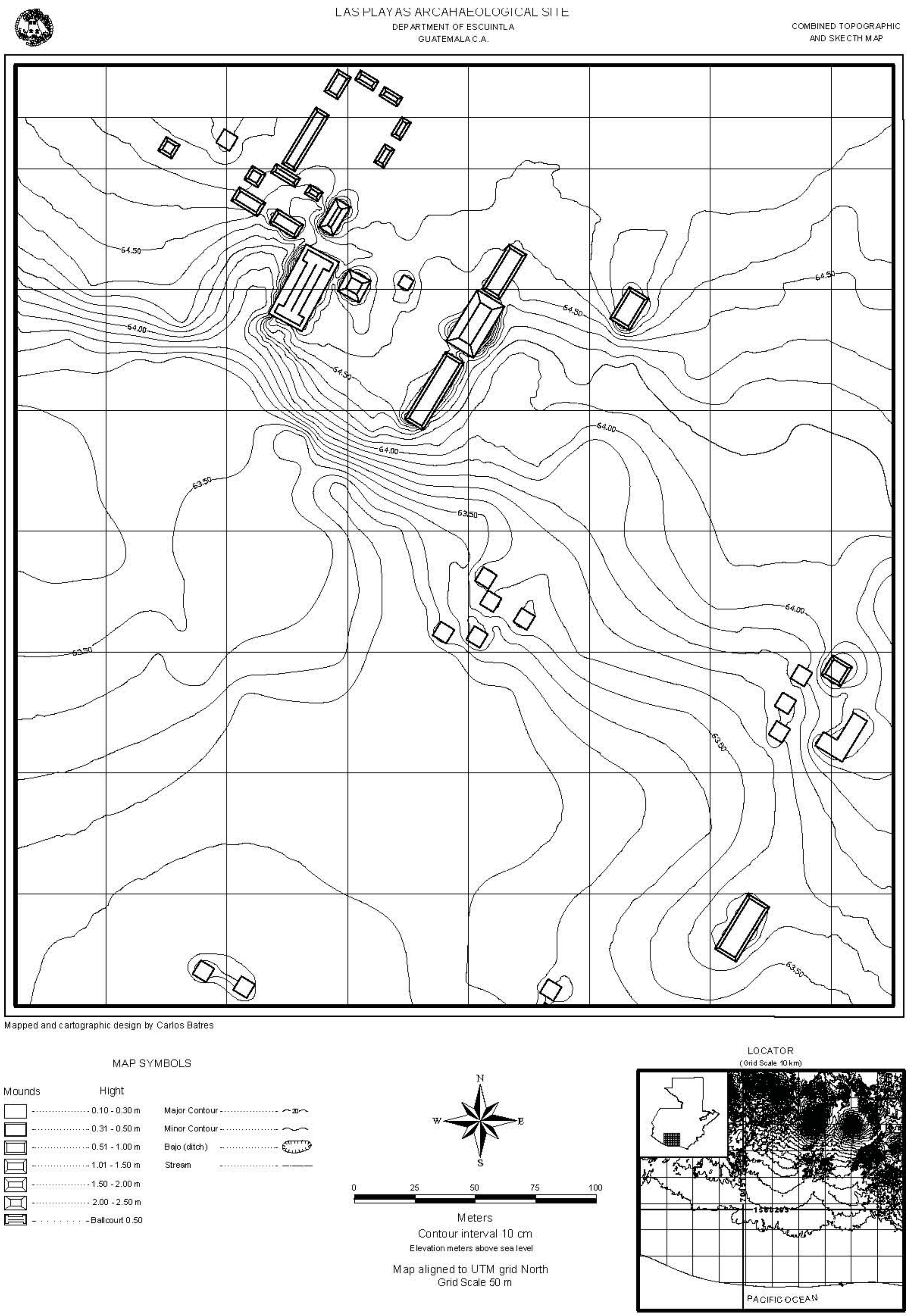


Figure 29: Las Playas Sketch and Topographic Map

The major grouping consists of nineteen mounds (0.10-1.50 m) and the I-shaped ballcourt (1.0 m). The central area forms three rectangular plazas oriented in a northeasterly alignment. A cluster of five mounds (0.10 – 0.30 m) is found in the center of the site. Another cluster of five mounds (0.20 - 0.40 m) is situated slightly to the south and east. A fourth cluster of five mounds (0.20 - 0.40 m) is found in the south. Two small mounds (0.20 m) are located west of this group. These five mound clusters follow the same general northeasterly orientation of the site.

Nuevo Mundo

The Nuevo Mundo site was first reported after 2004 surveys conducted by the Pipil Project, (Bove, *et al.* 2004). The site is geographically located at 14° 11' 1.315" N Latitude and 91° 7' 43.221" W Longitude (UTM 15N 701959E, 1568755N) at an altitude of 65 m.a.s.l. Nuevo Mundo covers 12.57 hectares and has a slope of 0.55% descending to the southwest (see Figure 30). The terrain is primarily used for sugarcane production. Plowing activities have destroyed several mounds at the site. In spite of this destruction, fifty-four mounds (0.10 - 2.10 m) remain (see Figure 31). The highest mounds (0.40 - 2.10 m) are located in the southwestern portion of the site. The remaining mounds are sparsely distributed in an irregular grid formation.

Costa Rica

The Costa Rica site was initially reported by Edwin Shook in 1977 (Bove, *et al.* 2004). The surface area of the site is 36 hectares. Geographically, it is situated at 14° 11' 4.569" N Latitude and 91° 7' 43.228" W Longitude (UTM 15N 701958E, 1568855N), at an altitude of 66 m.a.s.l. Land owner restrictions

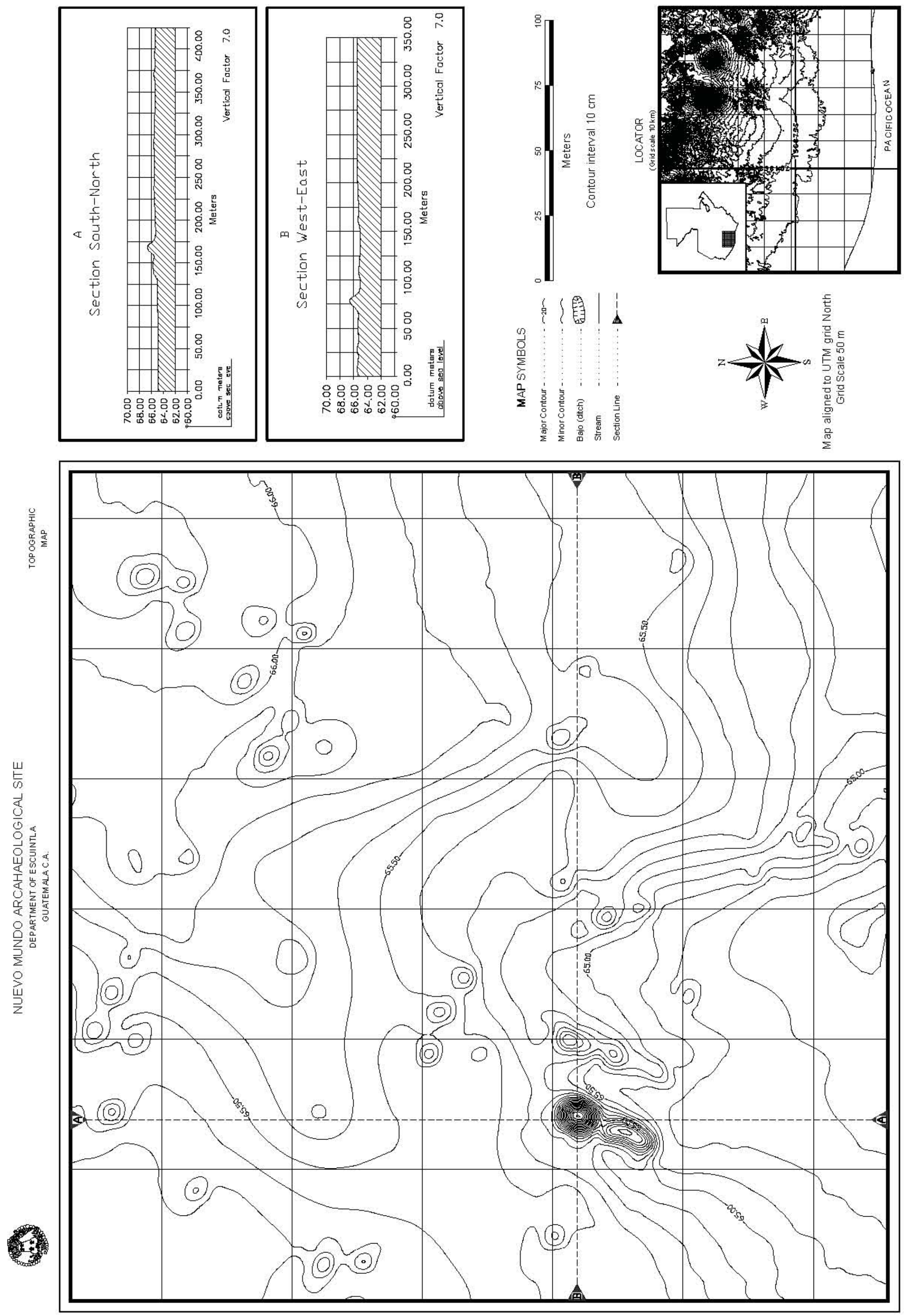


Figure 30: Nuevo Mundo Topographic Map

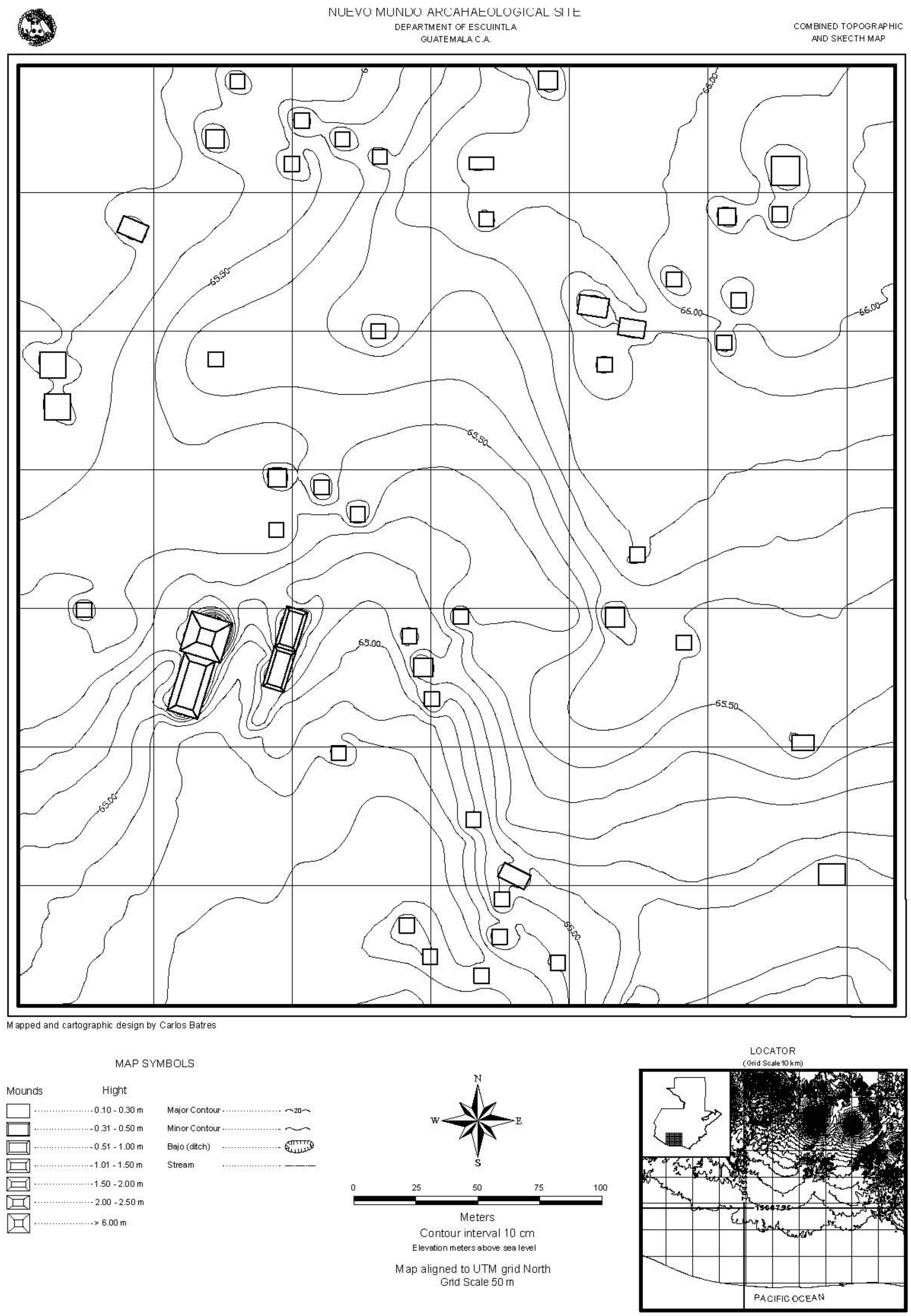


Figure 31: Nuevo Mundo Sketch and Topographic Map

prohibited survey of the site. Sketch maps registered sixty-one mounds (0.20 - 3.00 m height) (see Figure 32).

The site's terrain is relatively flat and characterized by the presence of sugarcane fields. In the southern portion of the site, several mound clusters are nucleated around a central plaza area. They are oriented north-south along an irregular grid.

Yolanda

The Yolanda site is located at 14° 2' 38.152" N Latitude and 91° 7' 50.793" W Longitude (UTM 15N 701855E, 1553289N) at 10 m.a.s.l. Like the Costa Rica site, permission for conducting archeological work or survey mapping was not possible. The description and sketch map are derived from reports by Bove who documented the site in 1991. Yolanda covers 72.77 hectares and consists of one-hundred-three earth mounds (0.20 - 5.00 m).

The site consists of three organized plazas (see Figure 33). Two well defined clusters are located in the southern portion of the site, while a third, less well defined cluster is found to the north. The three groups are in roughly north-south alignment in relation to one another. The southern group consists of twenty-four mounds (0.20 - 5.00 m) enclosing a central mound of 5 m in height. Directly to the north, the second grouping consists of thirty-two mounds (0.20 - 5.00 m) with a central high mound. The third cluster, to the north, consists of ten mounds (0.20 - 5.00 m) with the highest mound centrally located. Twenty-one small mounds (0.20 - 0.40 m) are found in the western portion of the site. Other small clusters are found between the three primary plaza groupings.

Caulote

Caulote was not mapped during 2003 reconnaissance surveys. This site

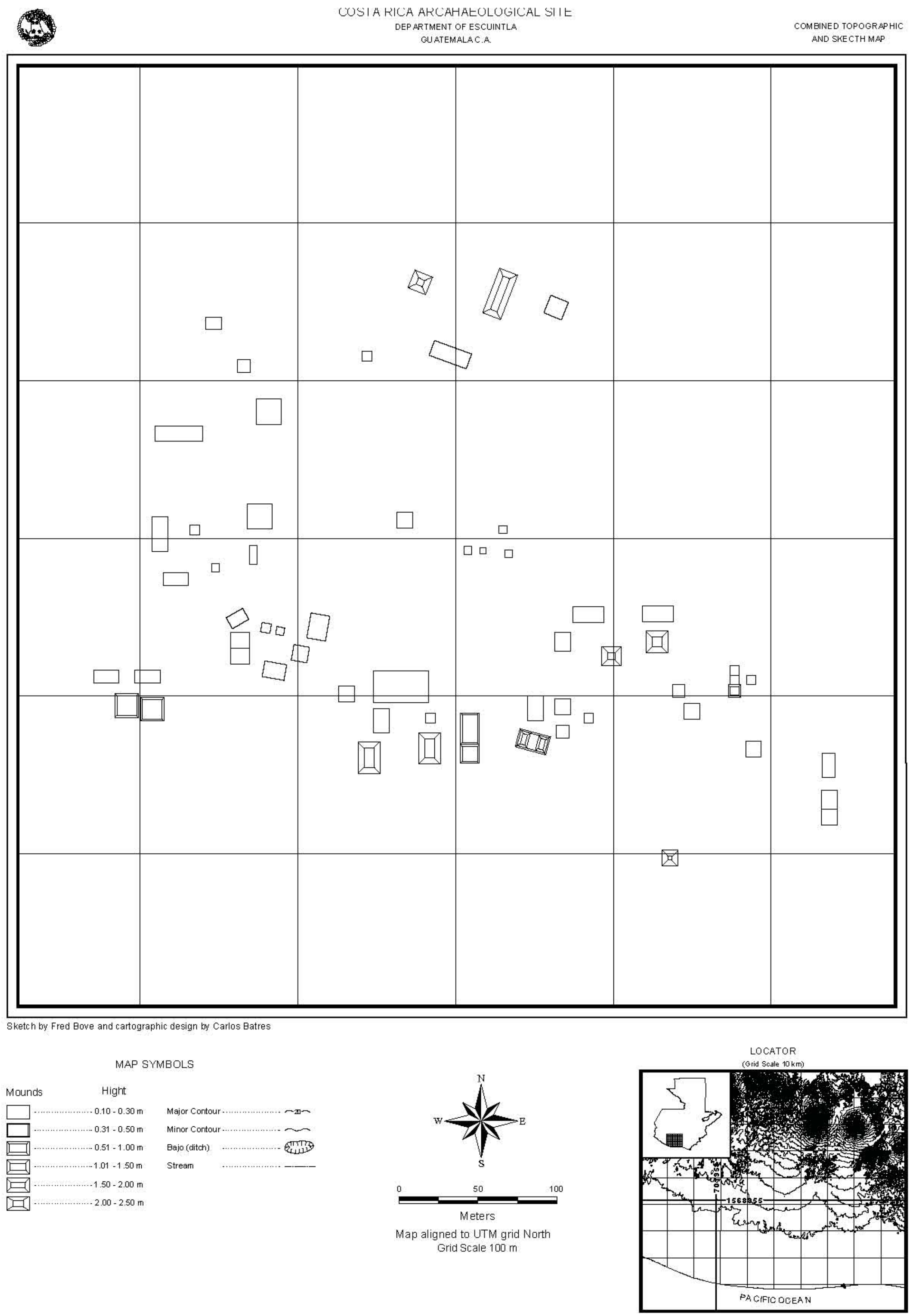


Figure 32: Costa Rica Sketch Map

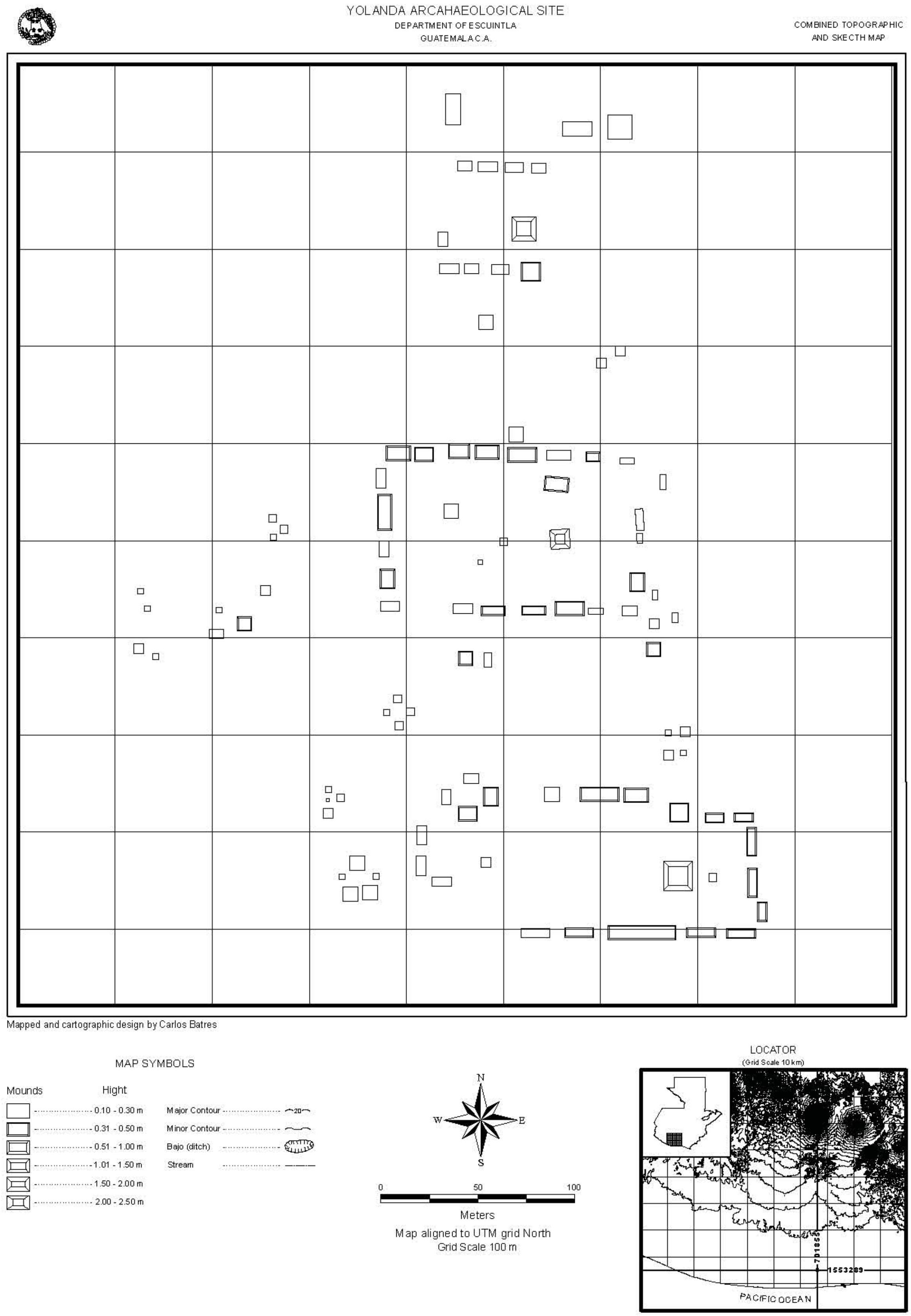


Figure 33: Yolanda Sketch Map

is situated immediately to the north of the Carolina site. It is likely that it was part of the same settlement. Geographically, it is situated at 14° 2' 11.490" N Latitude and 91° 4' 14.032" W Longitude (UTM 15N 708366.61E, 1552522.65N), at approximately 17 m.a.s.l. The site covers 10.5 hectares. It is situated on the west bank of the *Zanjón San Pedro*. The description and sketch site map is reported in Bove's 1979 field notes (Bove, *et al.* 2004).

The Caulotes site is comprised of twenty-six earth mounds clustered in four groups (see Figure 34), each forming a quadrangular plaza. The first northern group consists of six mounds (0.30 - 0.80 m) with a larger, higher mound in the center. The second group consists of four mounds (0.20-1.00 m). A third group of eight mounds (0.20 - 1.00 m) is situated directly to the south. Again, the highest mound is found in the center of the quadrangular plaza. The fourth grouping (southern) is comprised of eight mounds (0.20 - 1.00). The highest mound (1.00 m) of this group is again found in the center of the cluster.

Izcuintepeque

Izcuintepeque is known through brief descriptions in four major sources including the accounts of the conquistador Pedro de Alvarado, *El Memorial de Solola*, *Título de Alotenango*, and the *Lienzo de Tlaxcala.* Through these accounts it is known that the city was the major center of the Nahua-Pipil in the central Pacific coast region. The site was destroyed when the Spanish arrived but it is believed to have occupied the area where the modern city of Escuintla is located.

Escuintla took its name from the pre-Hispanic site. Francis Polo Sifontes (1979) proposed that the original location of Izcuintepeque was in the area known as *Chagüites* found in the northeastern portion of the town of Escuintla. Investigations carried out in the area were unsuccessful at locating it. Based

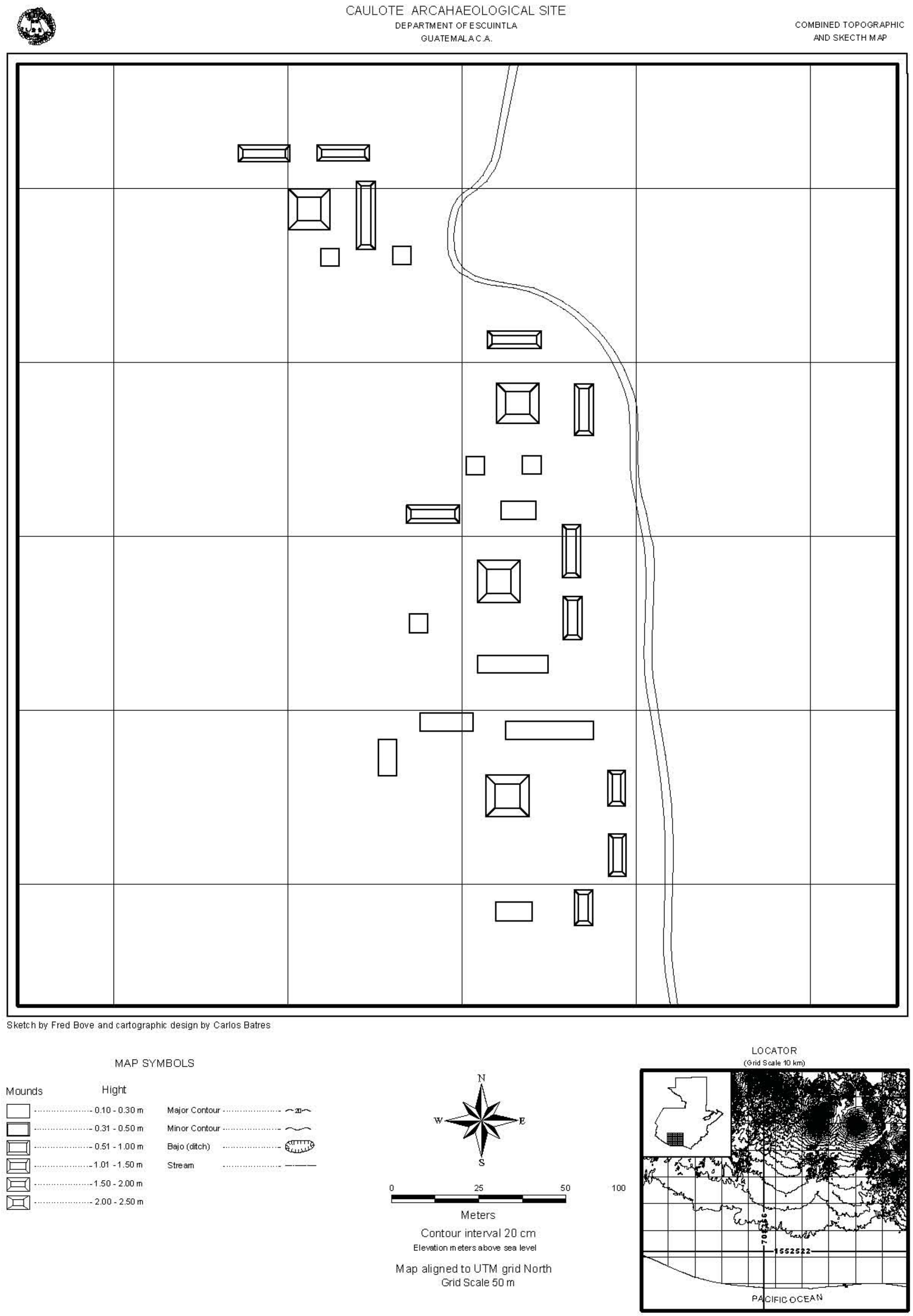


Figure 34: Caulotes Sketch Map

on Polo Sifontes suggestion, Izcuintepeque would have been located at 14° 18' 17.858" N Latitude and 90° 47' 3.882" W Longitude (UTM 15N 739000E, 1582500N) at an altitude of approximately 325 m.a.s.l.

Analysis

The site plan characteristics include: a) mound size and volume, b) plaza shape, orientation, and size, c) ranked site sorting, d) physiographic site domain, and f) distances among or between sites.

Mounds

In the ten sample sites, a total of 514 earth mounds were identified. These comprise a total surface area of 70,649.61 m^2 and a volume of 41,275.45 m^3 (see Table 1). The highest frequency of earth mounds (n = 368 or 71.60%) correspond to the range between 10 and 30 cm in height. The second highest frequency range (n = 97 or 18.87%) are between 31 and 50 cm in height. The remaining 9.53% (n = 49) fall into a broad range between 0.51 and 8 m in height (see Table 2).

Plazas

Traveling north-west to south-east, eight sites have primary plazas (see Table 3). These include the sites of: Costa Rica, Las Playas, El Jute, Gomera, Caulotes, Carolina, Pajuil, and Yolanda.

Costa Rica's proposed plaza is situated in the central area of the site. It is rectangular and open to the east with mounds in north-south alignment. The plaza covers an area of 7,804.77 m^2 (see Figure 35 a). In the central area are five small mounds, each of 0.30 m in height.

AREAS AND VOLUMES BY SITES

Site	Count Mounds	Σ Area Mounds	Σ Area Plazas	Σ Mounds & Plaza Areas	Total % m^2	Σ Mounds m^3	Total % m^3
Carolina	73	10202.43	11997.32	22199.74	10.37	12372.94	30.73
Caulotes	26	1981.32	4874.10	6855.42	3.20	805.87	2.00
Cosata Rica	61	8279.02	4874.10	43466.72	20.30	3098.63	7.69
El Jute	19	2846.56	6005.85	8852.41	4.13	1442.41	3.58
Esperanza	23	2186.83	0.00	2186.83	1.02	505.97	1.26
Gomera	79	13558.63	31003.93	44562.57	20.81	10011.09	24.86
Las Playas	38	3588.94	8451.54	12040.49	5.62	1373.50	3.41
Nuevo Mundo	54	2668.07	0.00	2668.07	1.25	927.05	2.30
Pajuil	38	3164.81	3467.13	6631.94	3.10	1235.21	3.07
Yolanda	103	22173.00	42498.81	64671.81	30.20	8496.05	21.10
Total	514	70649.61	113172.77	214135.99	100.00	40268.71	100.00

Table 1: Areas and Volumes by Mound and Plaza Sites

MOUNDS HEIGHT

Site	Ranges (m)														Total	
	0.10 - 0.30	%	0.31 - 0.50	%	0.51 - 100	%	1.01 - 1.50	%	1.51 - 2.00	%	2.01 - 2.50	%	> 5.00	%	Count	%
Carolina	61	83.56	3	4.11	4	5.48	3	4.11	0	0.00	0	0.00	2	2.74	73	14.20
Caulotes	11	42.31	11	42.31	4	15.38	0	0.00	0	0.00	0	0.00	0	0.00	26	5.06
Cosata Rica	46	75.41	8	13.11	5	8.20	2	3.28	0	0.00	0	0.00	0	0.00	61	11.87
El Jute	8	42.11	5	26.32	5	26.32	1	5.26	0	0.00	0	0.00	0	0.00	19	3.70
Esperanza	22	95.65	1	4.35	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	23	4.47
Gomera	55	69.62	12	15.19	5	6.33	4	5.06	1	1.27	2	2.53	0	0.00	79	15.37
Las Playas	18	47.37	16	42.11	3	7.89	1	2.63	0	0.00	0	0.00	0	0.00	38	7.39
Nuevo Mundo	50	92.59	2	3.70	1	1.85	0	0.00	0	0.00	1	1.85	0	0.00	54	10.51
Pajuil	30	78.95	6	15.79	1	2.63	1	2.63	0	0.00	0	0.00	0	0.00	38	7.39
Yolanda	67	65.05	33	32.04	0	0.00	0	0.00	0	0.00	0	0.00	3	2.91	103	20.04
Total by Range	368	71.60	97	18.87	28	5.45	12	2.33	1	0.19	3	0.58	5	0.97	514	100.00

Table 2: Proportions and Percents by Site Mound Height

SITE PLAZA DATA

Site	Shape	Quantity	Total m^2	Major Plaza Data				
				Major Axis Alignment	Open Side	Center mounds	Height	Highest Mound Location
CAROLINA	Rectangular	1	11997.31	100^0 East	N-W	2	6 and 8 m	East
CAULOTE	Rectangular	3	4874.09	90^0 East	S-W	1	0.50 m	Northeast
COSTA RICA	Rectangular	1	4874.09	90^0 East	E	5	0.30	Center
EL JUTE	Circular	1	6005.85	x	E	1	1.5 m	East
ESPERANZA	x	x	x	x	x	x	x	x
GOMERA	Rectangular	1	31003.93	95^0 East	N-E	3	2.25 and 0.5 m	Center and East
LAS PLAYAS	Rectangular	3	8451.54	29^0 N-E	N & S	2	0.80 and 0.30	South
NUEVO MUNDO	x	x	x	x	x	x	x	x
PAJUIL	Rectangular	2	3467.13	90^0 East	W	1	1.10	Center
YOLANDA	Rectangular	3	42498.80	90^0 East	S-W	5	5 m	East

Table 3: Site Plaza Plan Characteristics

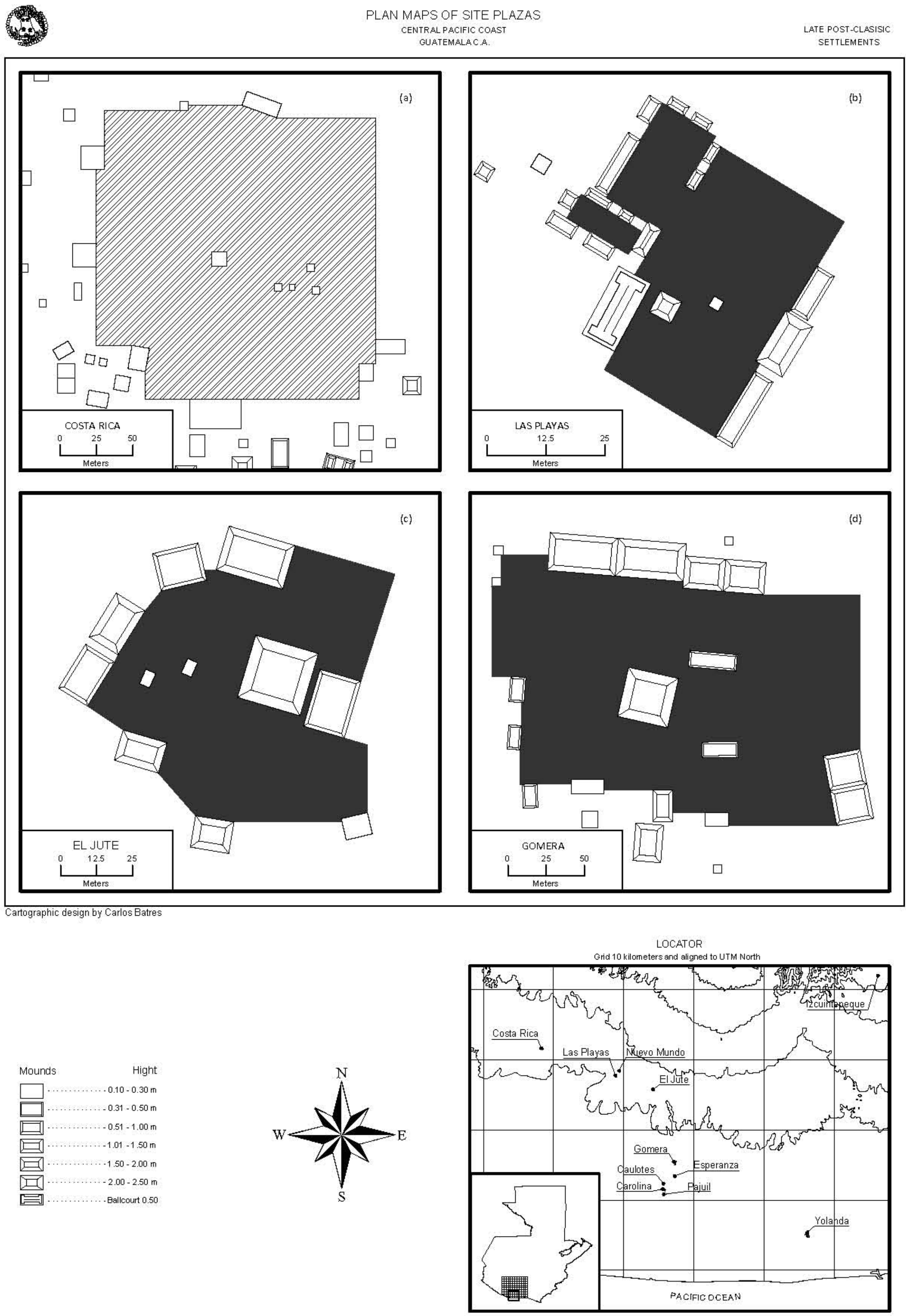


Figure 35: Major Site Plazas

The primary plaza group of Las Playas is a combined complex of three elongated rectangular plazas with one ballcourt found in the southwest corner of the plaza complex (see Figure 35 b). It is located in the northwestern portion of the site. The surface area of the complex covers 7,893.96 m^2. The southwestern plaza is a closed plaza arrangement. The northwest plaza opens onto the larger southeastern plaza area. The westernmost plaza is open to the south[46] bearing slightly to the west. The northwest and east plazas are aligned 28^0 to the northeast, while the southeast plaza is oriented 102^0 to the southeast. The lowest mound of the plaza complex is 0.30 m in height. It is located in the south-central area of the plaza. The highest mound (0.90 m) is found in the southwestern area of the largest plaza subdivision. It is located near the ballcourt. The ballcourt (29 x 14 m) is I-shaped and oriented 28^0 northeast. The central depression is 6.67 m wide. This alignment is consistent with the general alignment of the site.

The central plaza of El Jute consists of mounds in semi-circular arrangement. The plaza opens to the east (see Figure 35 c). It is situated in the southern sector of the site, covering 6,005.85 m^2. The highest mound (1.50 m) is found in the west, situated in the center of the plaza.

Gomera's main plaza is located in the northern sector of the site and covers 31,003.93 m^2 (see Figure 35 d). In the central plaza area, the highest mound is 2.25 meters. It is slightly offset from the main alignment of the site. Two lower elongated mounds (0.50 m each) are found to the east of the primary mound. The plaza is aligned with the primary west-east axis of the site. It is open to the northeast and bounded in the south by two mounds (1.00 m each) in northwest-southeast alignment.

The main plaza of Caulotes is found in the southern portion of the site. It

46 The mounds that closed the plaza on the north side were destroyed by modern housing developments in the town of Las Playas.

has a west-east orientation and covers 2,735.64 m^2 (see Figure 36 a). The major axis of this plaza is aligned west-east. It is open in the west and its highest mound (0.50 m) is centrally located.

Carolina's main plaza is rectangular in form (see Figure 36 b). Found in the southeastern area of the site, the plaza is aligned 10^0 bearing northeast. It is open to the northwest. The plaza covers an area of 11,997.32 m^2. The two highest mounds of the site are 6 and 8 m in height.

The main plaza of Pajuil is situated in the central area of the site and covers 1,655.52 m^2 (see Figure 36 c). Its alignment is west-east with an opening to the west. The tallest mound (1.10 m) is located in the center of the plaza.

Yolanda's main plaza is aligned to the west-east axis of the site. It is found in the central portion (see Figure 2d) between two other large plaza areas. It covers 37,511.90 m^2, and is open in the southwest corner. Five sparsely distributed mounds (0.20 - 5.00 m) are found in the center. The highest mound is situated in the east-central plaza area.

The general alignment of sites is north-south. Site plazas exhibit slightly different patterns of alignment from this standard pattern. The sites of Yolanda, Caulote, and Pajuil share alignment relatively consistent with their plazas. Carolina presents a different pattern of alignment between the central plaza and the rest of its mound groupings. Its central plaza is skewed slightly eastward from the west-east orientation of other mounds. Esperanza presents an irregular north-south grid alignment with most mounds oriented north-south. A highly irregular north-south grid alignment is found at Gomera. Its primary plaza area is oriented along the east-west axis of the site with the central mound and others in a slightly skewed and irregular pattern of alignment. The alignment of the site of El Jute is inconsistent with its semi-circular plaza area. Las Playas shows a formal, consistent pattern of alignment among its mounds and primary plaza

Figure 36: Major Site Plazas

area, all of which bear to the northeast. Nuevo Mundo is irregularly aligned on the north-south axis of the site. Costa Rica's general alignment is north-south however, mound groupings to the north are inconsistent (bearing east) from the rest of the site.

Site Ranking and Sorting

Based on mound height, volume, and plaza characteristics, the site plans were ranked in three hierarchical levels. The sites of Costa Rica, Las Playas, Gomera, Carolina, Yolanda, and Izcuintepeque were classified as Rank 1 because they are characterized by generally larger mounds with greater volume and more complex plaza organization than Rank 2 and 3 sites. Rank 2 sites are relatively smaller and less complex. These include the sites of Pajuil, Caulote, and El Jute. Esperanza and Nuevo Mundo are Rank 3 sites and have smallest mounds and most simplistic plaza characteristics.

Physiographic Site Domain

With the exception of the site of Izcuintepeque in the *bocacosta* zone, all nucleated site groupings are located in the coastal plain zone at altitudes between fifteen and sixty-five meters above sea level. As was mentioned in Chapter 4, the *bocacosta* zone is classified as a hot tropical monsoon climate with extreme moisture and high rainfall, and forest vegetation. In contrast, the coastal plain zone is predominantly a park savanna landscape with hot, semi-dry or dry tropical climate and low average rainfall. The sites in the coastal plain zone are bounded by major river basins that flow through the relatively flat terrain and deep soils that characterize the region.

From west to east, the sites in the study are located near the banks and tributaries of the Coyolate, Acomé, and Achiguate River basins (see Figure 37).

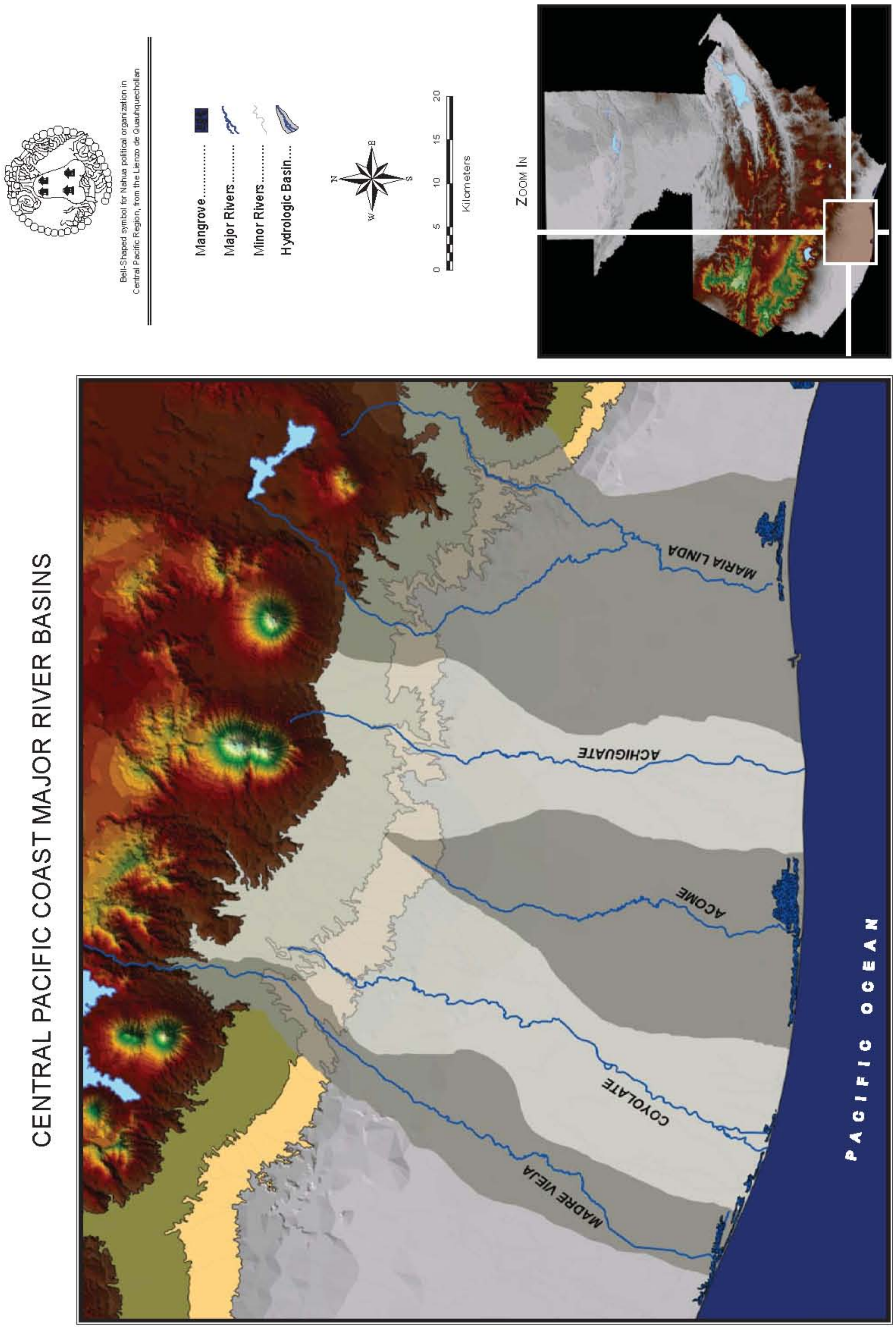


Figure 37: Central Pacific Cost Major River Basins

The sites of Costa Rica, Las Playas, Nuevo Mundo and El Jute are found along the middle Coyolate river drainage. The sites of Gomera, Esperanza, Caulote, Carolina, and Pajuil, as well as the site of Yolanda are found closer to the shoreline and estuary zones of the lower coastal plain between 6 and 14 km from the coast.

Costa Rica is located 0.5 km to the west of the Mascalate River, 30 km from the Pacific coast. The sites of Las Playas and Nuevo Mundo are situated along the bank of the lower-Cristobál River at a distance of 0.5 km east. Both Mascalte and Cristobál Rivers are tributaries of the Coyolate River. The El Jute site is located 2 km west of the lower-Aguero River, which part of the Acomé River drainage. On the west bank of the middle-Acomé River are the sites of Gomera (0.5 km), Esperanza (0.5 km), Caulote (1.5 km), Carolina (1 km), and Pajuil (0.4 km). Yolanda is 1 kilometer from the east bank of the lower-Achiguate River. The site of Itzcuitepeque would have been situated in the five-kilometer expanse between the Guacalate and Michatoya rivers.

The sediments that are carried by these rivers contribute to the richness of soils found in the region.

The coastal plain zone is an alluvial surfaced terrain with a relatively level slope averaging 1.17%. Costa Rica, Las Playas, Nuevo Mundo, and Jute are in terrains with an average slope of 0.38%. The soils are classified as IIB- Paxinamá (Simmons, *et al.* 1959:317-324), which are sandy alluviums of a dark brown color, between 10 and 25 cm deep. They are well drained, with low moisture content. The soils are moderately fertile and the terrain has no problems of erosion.

The sites of Gomera, Esperanza, Caulotes, Carolina, and Pajuil are situated in terrains with average slopes of 0.80%. The soils are classified as IIB-Tiquisate, characterized by volcanic ash alluvium, brown in color, between 40

and 50 cm deep (see Simmons, *et al.* 1959). Drainage is moderate, with high moisture content. In general, the area has low erosion and highly fertile soils.

The Yolanda site is found in another flattened terrain with soils consisting of alluvial materials, classified by Simmons *et al.* (1959:317-324) as IIB-Achiguate. The superficial soils are gray to dark brown in color and between 15 and 70 cm in depth. They are poorly drained, with high moisture content. The terrain does not have soil erosion problems and the soils are highly fertile.

Sites Distances

Five nucleated groupings were identified based on the proximity of smaller sites in relation to one another. A settlement group was defined when the sites were less than 1 km apart. The groupings consist of the sites of Costa Rica (nucleus 1); Las Playas, Nuevo Mundo and El Jute (nucleus 2); Gomera, Esperanza, Caulote, Carolina, and Pajuil (nucleus 3); Yolanda (nucleus 4, and Izcuintepeque (nucleus 5) (see Figure 38).

Costa Rica is located at the northwestern extent of the study area. It is situated 11.17 km from nucleus 2, and 25.60 km from nucleus 3. In relation to the site of Yolanda located in the southeastern extent of the study area, Costa Rica is distanced by 46.06 km. Nucleus 2 (Las Playas, Nuevo Mundo and El Jute) is located 16.15 km from nucleus 3 and 35.36 km from nucleus 4. The third nucleus (Gomera, Esperanza, Caulote, Carolina, and Pajuil) is distanced from nucleus 4 at Yolanda by 21.37 km.

From the proposed site of Izcuintepeque or nucleus 5, the four nuclei would have been located an average distance of 42.21 km. This distance is roughly equivalent to the distance between the two boundary sites of Costa Rica and Yolanda (for distances among sites see Figure 39)..

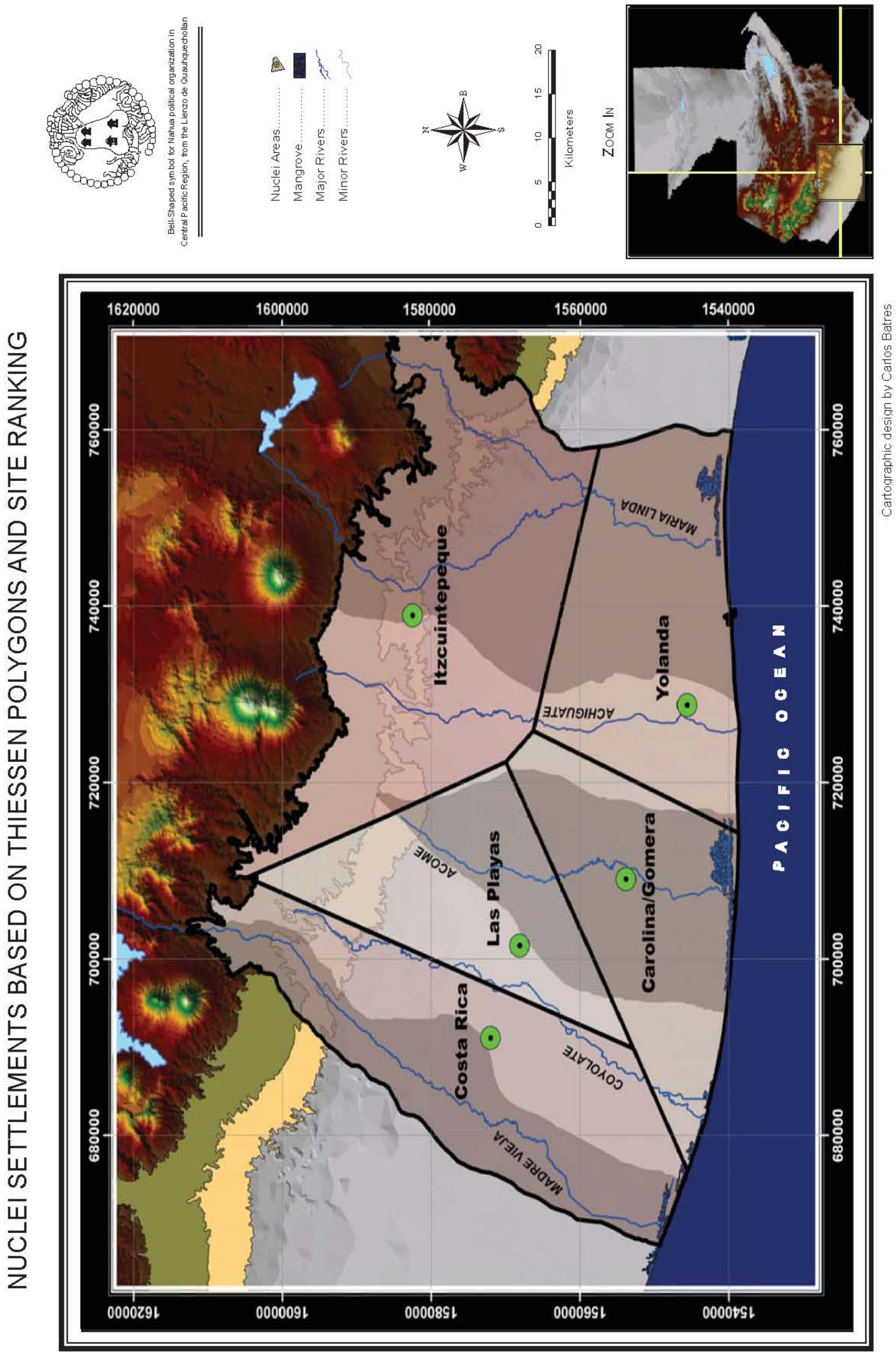
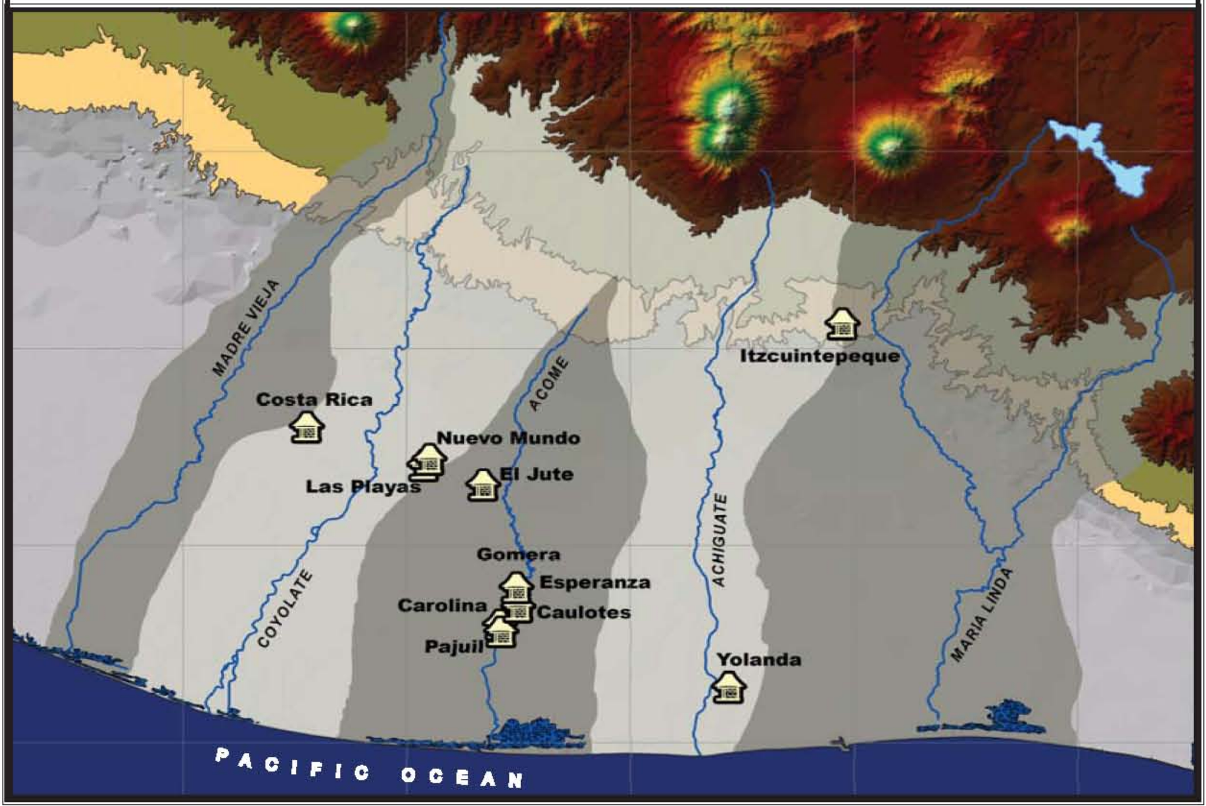
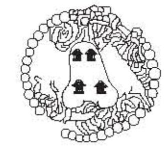


Figure 38: Settlement Nuclei Areas

DISTANCES AMONG SITES

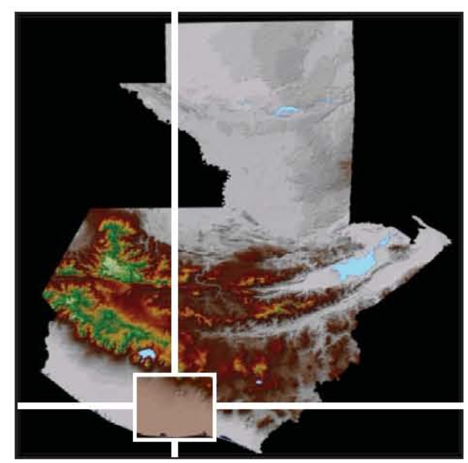
Site	Carolina	Caulotes	Costa Rica	El Jute	Las Playas	Pajuil	Yolanda	Esperanza	Gomera	Nuevo Mundo	Itzcuintepeque
Carolina	0.00										
Caulotes	0.56	0.00									
Costa Rica	26.47	26.07	0.00								
El Jute	14.25	13.70	16.84	0.00							
Las Playas	17.52	17.03	11.17	5.67	0.00						
Pajuil	0.73	1.28	27.07	14.98	18.22	0.00					
Yolanda	21.44	21.44	46.07	30.06	35.36	21.16	0.00				
Esperanza	2.44	2.44	26.30	12.77	16.66	2.97	20.52	0.00			
Gomera	4.04	4.04	24.87	10.84	14.93	4.69	21.50	1.96	0.00		
Nuevo Mundo	17.93	17.93	11.45	5.47	0.82	18.64	35.39	16.97	15.20	0.00	
Itzcuintepeque	43.27	43.27	49.05	36.06	40.12	43.73	38.28	40.84	39.59	39.42	0.00





Bell-Shaped symbol for Nahua political organization in Central Pacific Region, from the Lienzo de Quauhquechollan

ZOOM IN



Cartographic design by Carlos Batres

Figure 39: Distances among Sites

Discussion

Although covering a small percentage of the surface area, low mounds are most frequent throughout the sites (See chart 1). In fact, 368 low mounds ranging between 0.10 and 0.30 m in height account for only 7.60% of the total volume of mounds. The next mound-height cluster, ranges between 0.31 and 0.50 m. While accounting for 18.87% of the total mound volume, there are only ninety-seven mounds in this height class. Forty-four mounds with height ranges between 0.51 and 2.50 m comprise 8.55% of the mound volume of all sites. Only five mounds reach up to five meters in height, accounting for 0.97% of total mound volume. This quantitative information shows that site building preferences was not volume.

With the exception of the circular plaza at the El Jute site, all plazas are rectangular. The common feature is the location of mound groupings in the central portion of the site. Plazas are generally oriented along a major axis between 90^0 and 100^0 to the east. Again, the exception is Las Playas plaza with an orientation of 29^0 to the north-east. As Table 3 shows, the plazas vary in size, direction of opening, and number of central mounds.

Site plans show three primary variations. The first consists of random mound groupings surrounding a major plaza in a nucleated site plan pattern (see Gomera and Costa Rica sites). The second variation consists of clustered mounds that are adjacent or align with the major plaza in cluster nucleated group (see Las Playas, El Jute, Caulotes, and Yolanda sites). The third arrangement is formed by sectors (or multiple groupings) of clustered mounds that are adjacent to the major plaza which may be randomly or consistently distributed (see Pajuil, Carolina, Esperanza, and Nuevo Mundo sites).

Some sites exhibit particular features and characteristics that identify

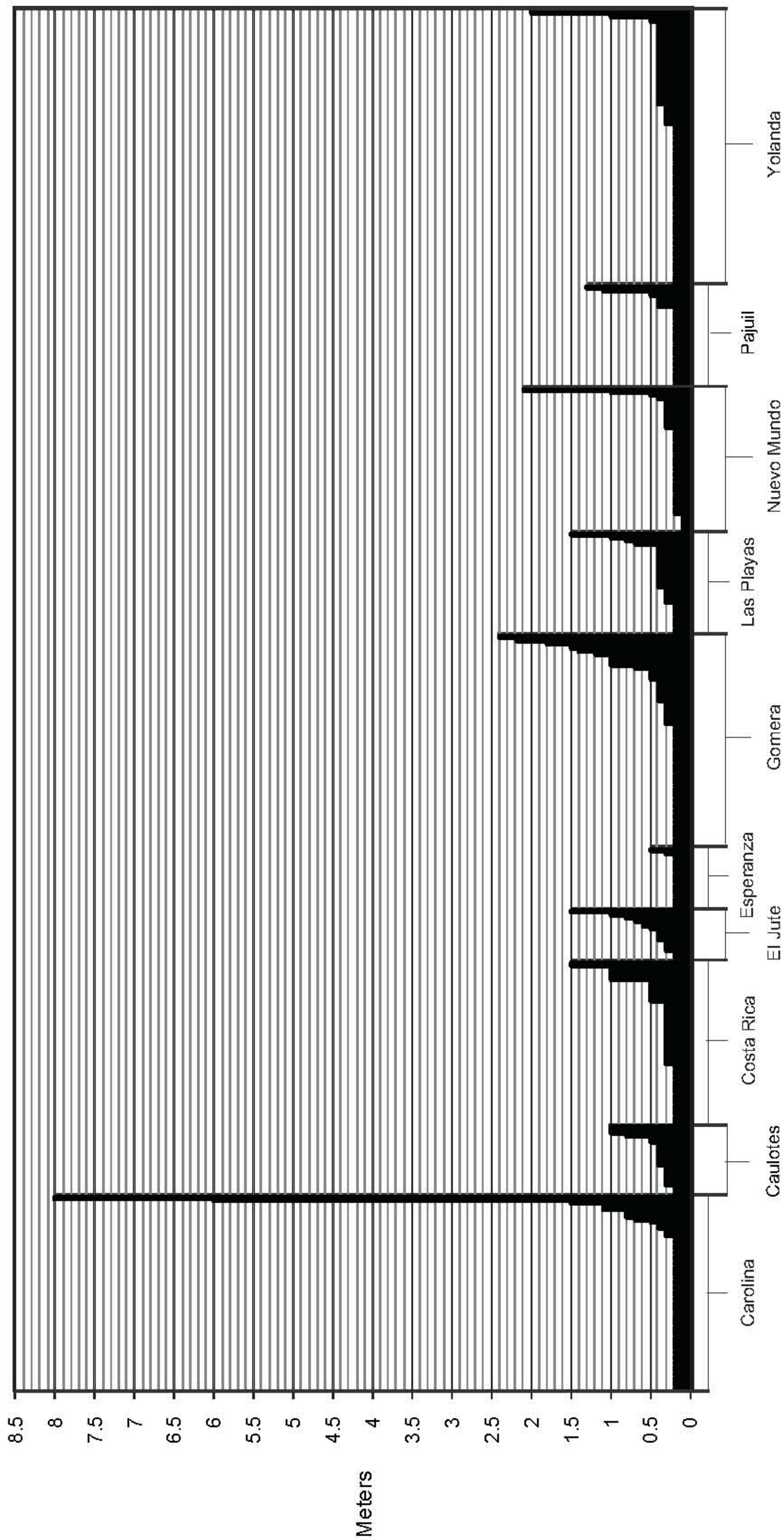


Chart 1: Earth Mound Height Distribution by Sites

them apart from other sites. Such is the case of the Carolina site which has a Twin-pyramid complex in the center of its major plaza. A characteristic feature of Las Playas is the I-shaped ball-court found in the south side of its main plaza complex. Caulotes and Yolanda sites had rectangular plazas that were in alignment with other mounds in the plan of each site. The site of Pajuil is characterized by a circular a plaza. Each of the abovementioned features identifies individual sites apart from others in their respective nuclei and other sites in the sample.

In contrast to the variability in site plan, the distribution of settlements present some patterns related to their geographic setting. With the exception of Izcuitepeque (located in the piedmont), Yolanda (situated close to the estuary zone), all sites are found in the coastal plain zone, each with similar access to waterways, natural resources, and fertile soils. The average distance between sites and major rivers and/or seasonal streams is from 0.5 to 1Km. The majority of sites have *bajos* (water pits, catch basins or seep springs) close to or into the settlement area. The soils are mainly of type IIB (see Figure 40) which is good for major agricultural activities (Simmons, *et al.* 1959). The humidity accumulated by these soils during the rainy season, extends the cultivation activities into the dry season. In general, the coastal plain zone and its resources were accessible to all sites, including those in the piedmont and estuary zones.

On the basis of geography, distances, size, and ceramic artifact composition identified during survey (discussed in the following Chapter 7) all sites in the sample are circumscribed in five nucleated areas throughout the central Pacific region. The nuclei are described as follows.

The Costa Rica site forms Nucleus 1(see Figure 41). Nucleus 2 is comprised by Las Playas, Nuevo Mundo, and El Jute sites (see Figure 42). While Gomera, Esperanza, Caulote, Carolina, and Pajuil sites form Nucleus

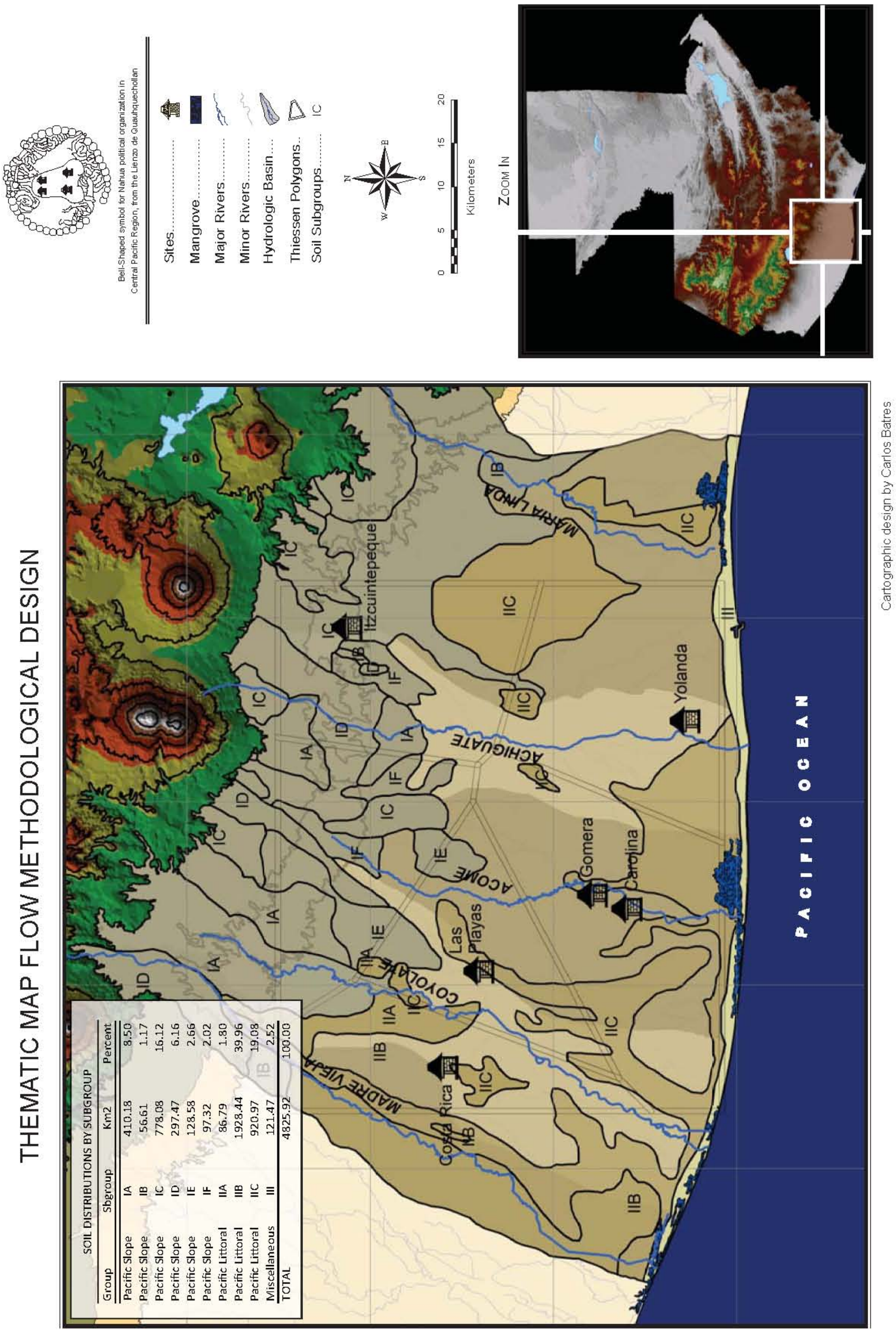


Figure 40: Central Pacific Coast Soil Types

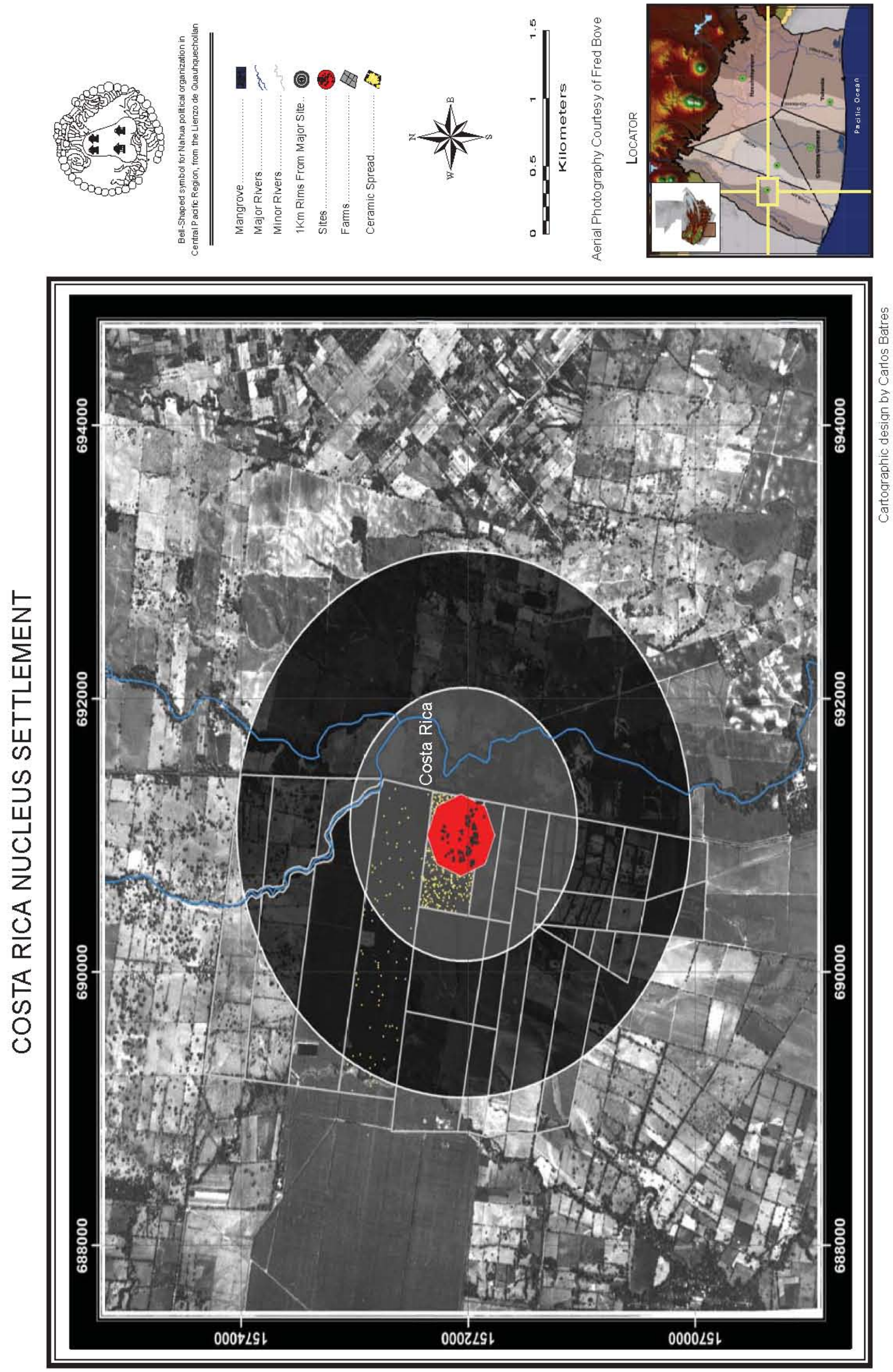


Figure 41: Costa Rica Nucleus Area

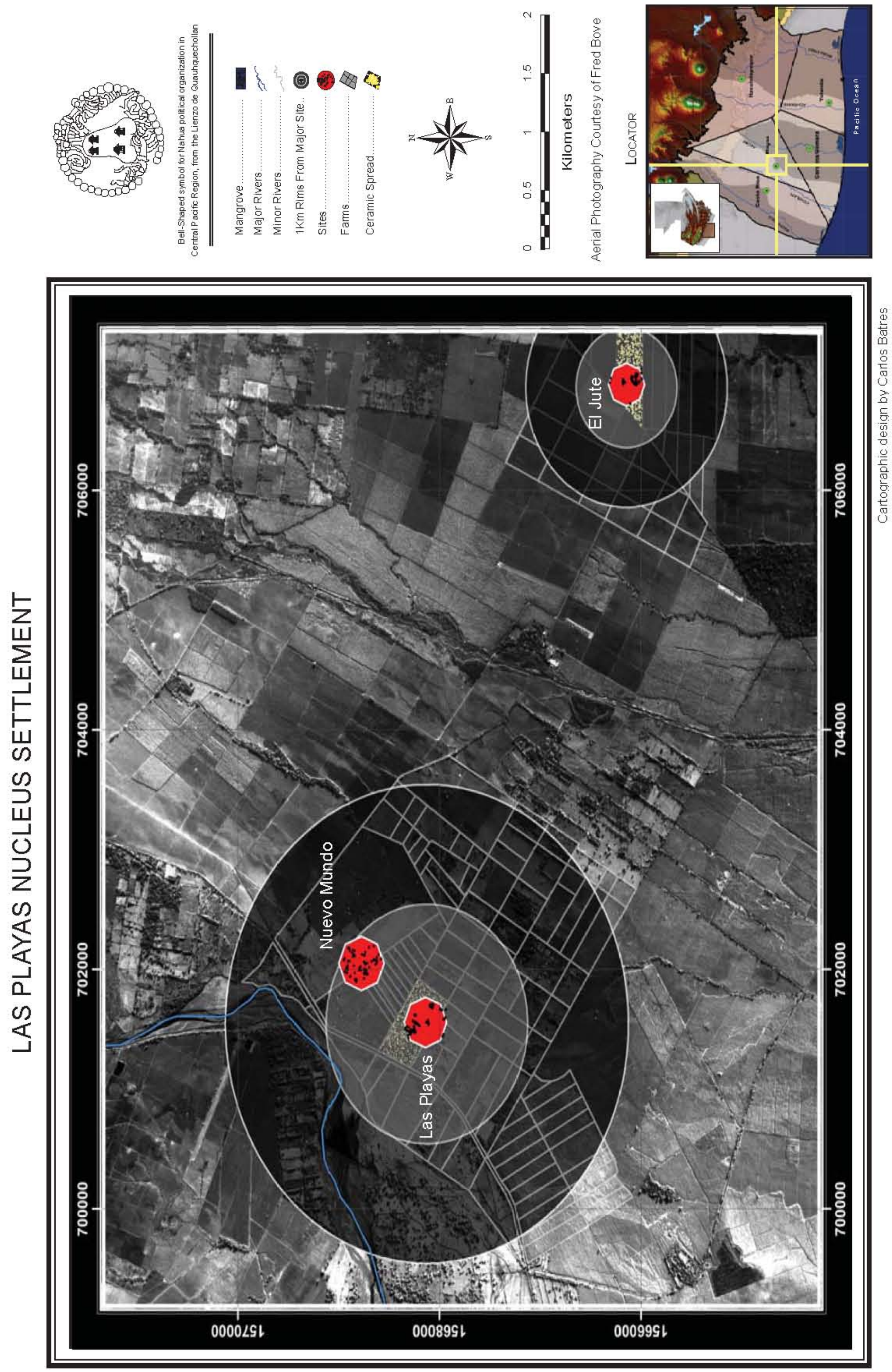


Figure 42: Las Playas Nucleus Area

3 (see Figure 43). The Yolanda site is Nucleus 4 (see Figure 44), and Izcuintepeque is Nucleus 5.

Summary

Observing the site plan there are several variations among the sites. Orientation, absence or presence of plaza, ball-court, Twin-pyramid, circular plazas or rectangular plazas mark some of the differences between site plans. In contrast, a tendency toward central mound placement, large plazas, and scant mound volume is observed. The sites are located primarily in the coastal plain zone, where flat terrain and fertile soils are crossed by several rivers and seasonal streams. Throughout this geography, the settlements form five nucleated areas defined by their spatial arrangement and proximity. Particularities of sites, on the small scale, contrast with their geographic distributions on the large scale, where organized and nucleated patterns exist.

While some reflections on the variability among the sites will be discussed further in Chapter 8, the upcoming Chapter 7 explores the ceramic data in detail.

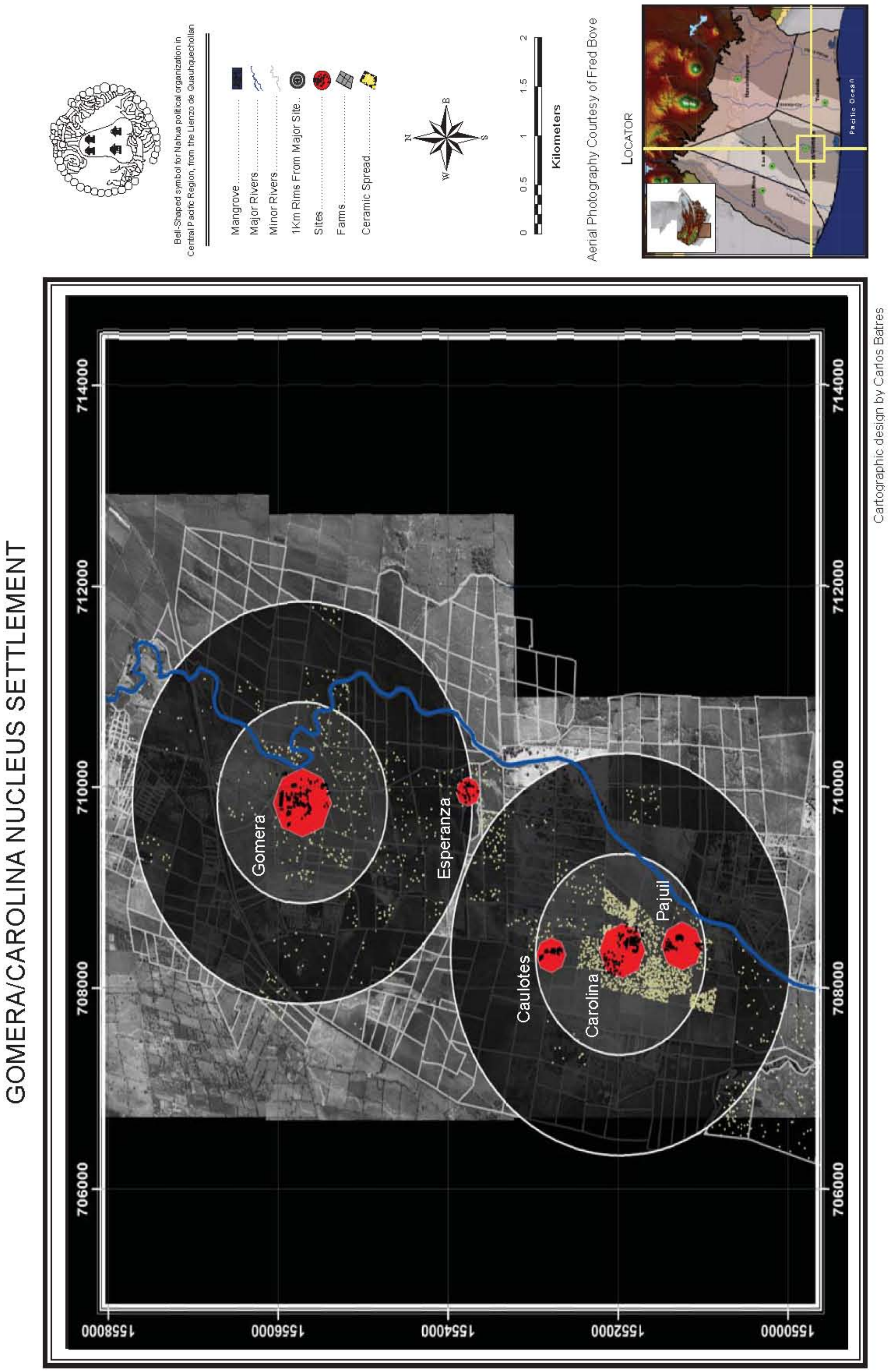


Figure 43: Gomera/Carolina Nucleus Area

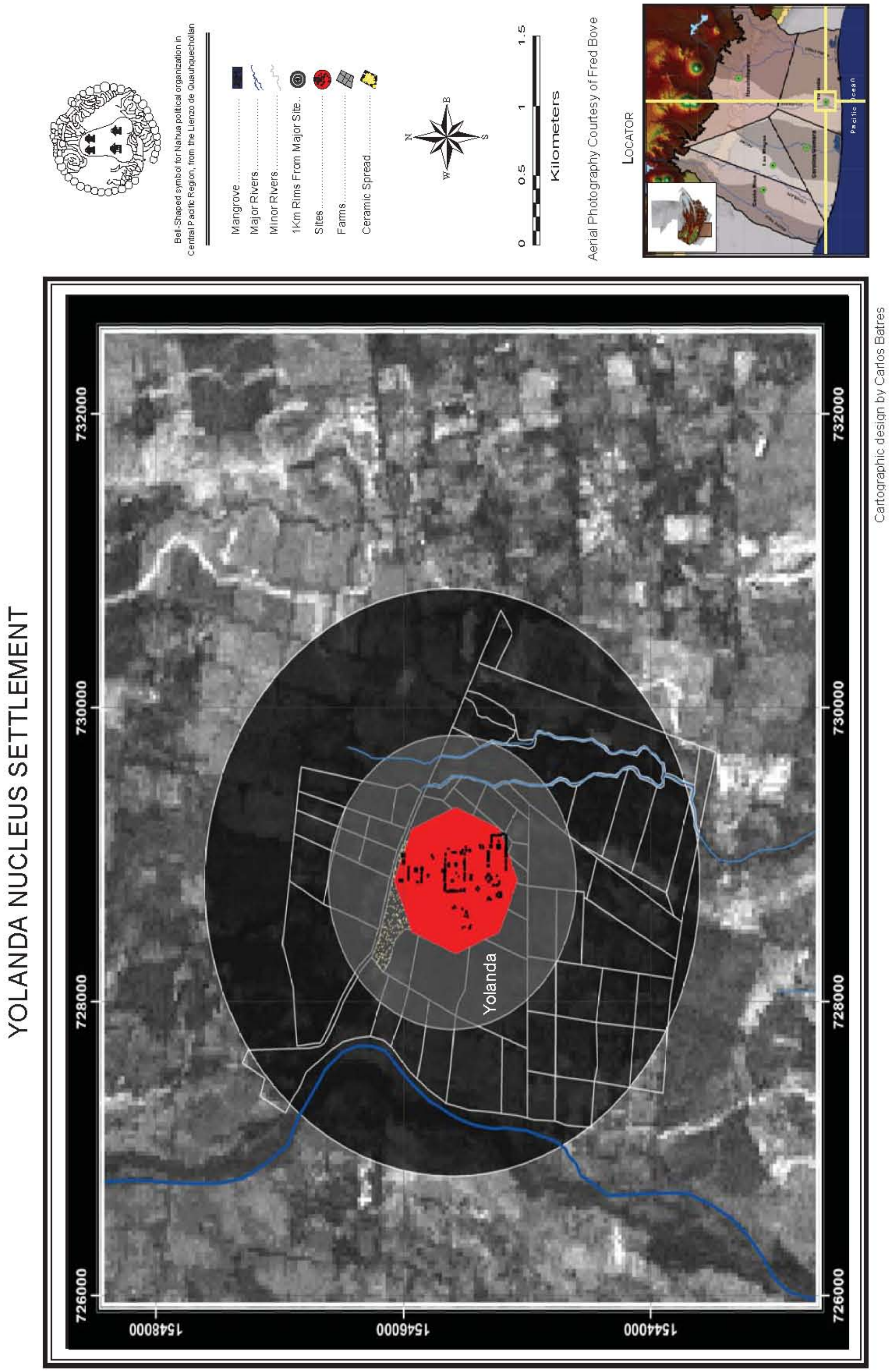


Figure 44: Yolanda Nucleus Area

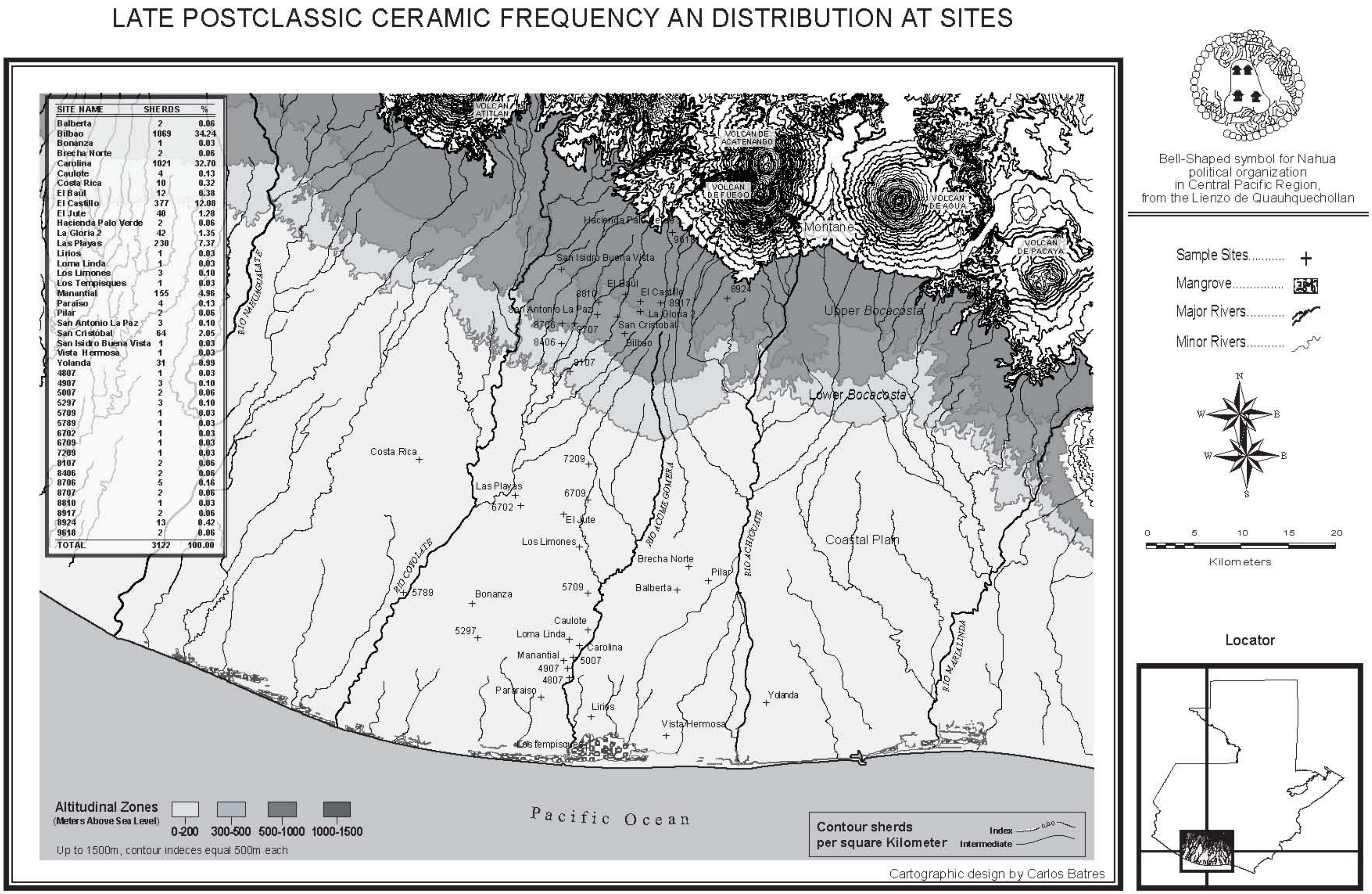
CHAPTER VII.
CERAMIC DATA

The ceramic sample consists of 3,122 sherds extracted from the Pipil Project's ceramic database. This sample, in conjunction with other temporal ceramic complexes, is part of the large ceramic sample collected by Bove during investigations in central Pacific coast region. The 3,122 sherds represent the Ixtacapa ceramic phase complex from the central Pacific region (see Figure 45).

Ixtacapa Phase Ceramic Complex

Temporally, the Ixtacapa phase covers the last stage of the Postclassic period (ca A. D.1200/1250-1500) in the central Pacific coast region (see Table 4). This complex is distinct from other local central Pacific coast Classic period ceramic complexes (Bove 2002; Bove, *et al.* 2004) including those of the nearby coastal Xinca (Estrada Belli 1999; Kosakowsky 2002; Kosakowsky, *et al.* 2000) (Kosakowsky, *et al.* 2000) and those of the highland regions (Nance, *et al.* 2003; Navarrete 1962; Parsons 1967; Robinson 1994, 1998; Wauchope 1970). Throughout the Pacific coast corridor and Highland regions, the Ixtacapa phase (see Table 5) is contemporaneous with the Ixcaflores ceramic complexes of the southeastern Guatemalan coast (Kosakowsky, *et al.* 2001) and Peor-es-Nada ceramic complexes from the site of Bilbao in the Cotzumalguapa area (Parsons 1967). In the central highlands, the Ixtacapa phase corresponds to the Chinautla ceramic complex at the Kaminaljuyu site (Hatch 1993; Shook and Hatch 1978).

The Ixtacapa phase compress seven local ceramic groups (see Table 6)



SITE NAME	SHERDS	%
Balberta	2	0.06
Bilbao	1069	34.24
Bonanza	1	0.03
Brecha Norte	2	0.06
Carolina	1021	32.70
Caulote	4	0.13
Costa Rica	10	0.32
El Baúl	12	0.38
El Castillo	377	12.08
El Jute	40	1.28
Hacienda Palo Verde	2	0.06
La Gloria 2	42	1.35
Las Playas	230	7.37
Lirios	1	0.03
Loma Linda	1	0.03
Los Limones	3	0.10
Los Tempisques	1	0.03
Manantial	155	4.96
Paraiso	4	0.13
Pilar	2	0.06
San Antonio La Paz	3	0.10
San Cristóbal	64	2.05
San Isidro Buena Vista	1	0.03
Vista Hermosa	1	0.03
Yolanda	31	0.99
4807	1	0.03
4907	3	0.10
5007	2	0.06
5297	3	0.10
5709	1	0.03
5789	1	0.03
6702	1	0.03
6709	1	0.03
7209	1	0.03
8107	2	0.06
8406	2	0.06
8706	5	0.16
8707	2	0.06
8810	1	0.03
8917	2	0.06
8924	13	0.42
9618	2	0.06
TOTAL	3122	100.00

Figure 45: Ixtacapa Ceramic Frequency and Distribution

PERIOD			PHASE
Postclassic	Late AD 1100/1200-1500		Ixtacapa
	Early		Pantaleón
Classic	Late AD 650/700 – AD 1100/1150		
	Middle AD 400 – 650/700		San Jerónimo
	Early AD 100/200 – 400		Colojate
Formative	Terminal 100 BC – AD 100/200		Guacalate
	Late 400 – 100 BC		Mascalate
	Middle	Late 600 – 400 BC	Guatalon
		Early 900/800 – 600 BC	Sis
	Early	Late 1150/1100 – 900/800 BC	Tejocate
		Middle 1250 BC – 1150 BC	Coyolate II
		Middle 1450 – 1250 BC	Coyolate I
		Early 1700 – 1450 BC	Madre Vieja

Table 4: Ixtacapa-complex Range Dates and Central Pacific Coast Chronology (Courtesy of Fred Bove)

Date	PERIOD		Central Pacific Coast (Bove 2002)	Bilbao Cotzumalguapa Area (Parsons 1967)	Southern Pacific Coast (Estrada Belli 1998)	S. E. Highlands Chalchuapa (Sharer 1978)	Central Highlands Kaminaljuyu (Hatch 1993)
1500	POSTCLASSIC	LATE	Ixtacapa	Peor es Nada	Ixacaflores	Ahal	Chinautla
1000		EARLY	Pantaleon	Hiatus (?)	Uxuna	Matzin	Ayampuc
	CLASSIC	LATE		Santa Lucia	Chiquimulilla	Payu	Pamplona Amatle
500		MIDDEL	San Jeronimo	Laguneta	Esclavos	Xocco	Esperanza
A. D.		EARLY	Cojolate	Mejor es Algo	Oscuro	Vec	Aurora
0 B.C.	FORMATIVE	LATE	Guacalate	Ilusiones	Ceiba	Caynac (Late) Caynac (Early)	Santa Calra Arenal
500		MIDDEL	Mascalate Guatalon Sis	Algo es Algo	Tamarindo	Chul Kal	Verbena Providencia
1000 1500		EARLY	Tecojate Coyolate II Coyolate I Madre Vieja		Cangrejo Huiscoyol	Colos Tok	Majadas Las Charcas Arevalo
1800	LATE ARCHAIC						

Table 5: Ixtacapa-Complex Correspondence to other Ceramic Complexes in Adjacent Areas

Ceramic Group	Ceramic Type	Principal Characteristics
Chinautla Polychrome	Chinaulta Polychrome	1. White cream or light grey paste 2. White to cream slip 3. Red and black painted designs 4. smoothed surface 5. *Tinajas* or water vessels
Chontel Unslipped	Chontel Unslipped	1. Unslipped Coarse ware 2. Deep bowls and jars with incurved sides and flared necks with strap handles 3. Notched, grooved, or plain short flanges 4. Thick rims
Masagua Reddish Brown	Masagua Reddish-Brown Comal	1. Thin micaceous or shist washy-slip 2. Slip is brilliant, translucent and irregular 3. Talc or soapy surface texture 4. Mica is not visible 5. *comales* (flat domestic p tortillas)
Pajuil Group	Paujil Polished Red-Brown, Pajuil Streaky Reddish Brown, Pajuil Streaky Brown-Black	1. Smoothed polished or matte surface 2. Thick slip 3. High-necked jars and bowls with incurved and flaring necks 4. With or without strap handles
Prado Black	Prado Black Comales, Prado Black Micellaneous	1. smoothed interiors (some with thin micaceous slip) 2. granular exteriors 3. flat comales (or dishes) and bowls
Remanso	Remanso Red/Buff, Remanso Red/Black, Remanso Red/Cream, Remanso Red/Orange	1. tripod bowls outcurved, incurved, flaring. 2. mold-made zoomorphic heads or ring supports 3. red painted designs on interior, exterior or both 4. molcajates (grater bowls)
Santa Rita Group	Santa Rita Micaceous, Santa Rita Jobonoso	1. presence of mica or steatite on the paste surface
Sumatan	Sumatan Cinnamon Red, Sumatan Streaky Brown, Sumatan Matte Brown	1. deep bowls and jars with incurved sides and flared necks 2. strap handles common 3. polished cinnamon reddish -brown to streaky or matte brown in color

Table 6: Ixtacapa Complex Local Ceramic Groups and Types Principal Characteristics (after Bove 2002:185-89)

and three imported ceramic groups (Chinautla Polychrome, Fortress Red-on-White, and Cream Slip). The local groups that are well known markers for the Postclassic period occupations and imported groups are indicators of Postclassic period interregional commercial exchange. The imported ceramic topic is discussed further in Chapter, but is not included in the following description and analysis of the local groups. The local groups include: Chontel Unslipped, Masagua Reddish-Brown, Pajuil, Prado Black, Remanso, Santa Rita Micaceous, and Sumatan ceramic groups.

Chontel Unslipped Group

The forms of this domestic group consist of deep bowls and jars (Bove 2002:185). This group comprises 4.48 % (N= 140) of the total sample and its distribution is primarily limited to the Coastal Plain zone (see Figure 46). In the coastal plain area, Chontel Unslipped has a proportion of 98.57% (n= 138 sherds), with the sites of Las Playas and Carolina having the highest ceramic frequencies of this group. In the upper *bocacosta* zone, Chontel Unslipped is negligible and comprises only 1.43% (n= 2 sherds) of the sample.

Masagua Reddish-Brown Group

The most common ceramic form of the Masagua Reddish-Brown group are *comales*[47] (flat plates) with open curving walls. Their distinguishing attribute is a wash on the interior surface of thin micaceous or schist (Bove 2002:185) . Proportionally, Masagua Reddish-Brown corresponds to 3.40% (N= 106) of the total sample. In the upper *bocacosta* zone, this ceramic group has a

47 The *comal* is a flat dish container whose height is less than a fifth of the mouth diameter. During the Postclassic period in Mesoamerica, the general function and use of the *Comales* is to bake tortillas (Smith and Piña Chán 1991:31). However, ethnographically other functions for the *comal* are to toast grain (exposure to indirect heat), vegetables, seeds, animal parts, birds, fish, insects, and open shells or mussels.

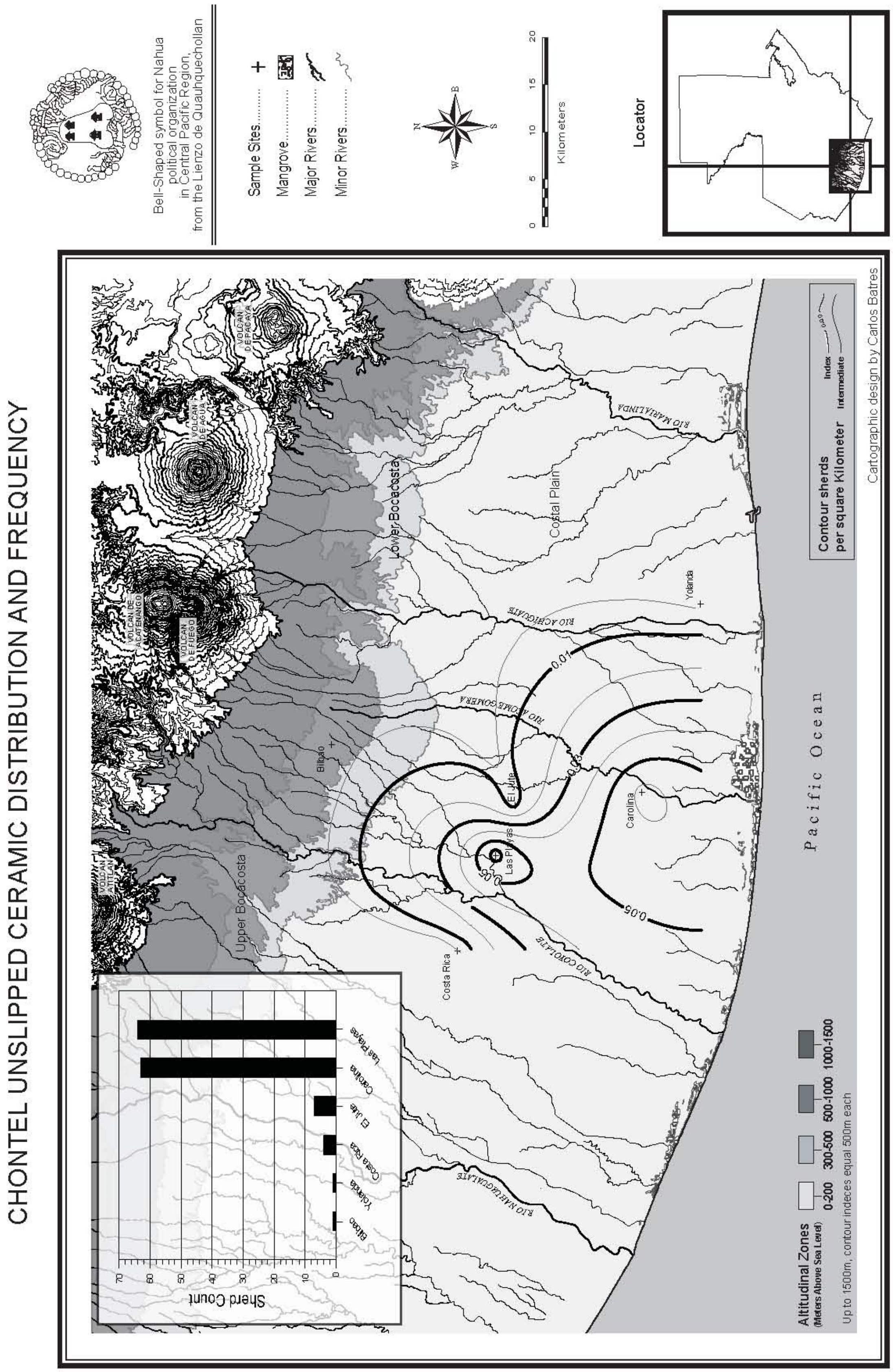


Figure 46: Chontel Unslipped Ceramic Map

proportion of 97.17% (n= 103 sherds). The highest frequencies are observed at the Castillo and Bilbao sites. Like Santa Rita (see below), the Masagua Reddish-Brown group is only represented in the lower Bocacosta and montane zones. The Masagua Reddish-Brown group is completely absent in the coastal plain zone. In both the lower *bocacosta* and the mountain zones combined, Masgua Reddish-Brown comprises only 2.83% (n= 3 sherds) of the sample. This distribution shows that Masagua Reddish-Brown tends to be localized in the upper *bocacosta* zone (see Figure 47).

Pajuil Group

The principal vessel forms of this ceramic group are bowls and high-necked jars. The bowls have incurved sides with outcurved or recurved necks and thick slips and polished surface finishes (Bove 2002:186). The Pajuil ceramic group represents 5.22% (N= 163 sherds) of the total sample. The highest ceramic frequency (149 sherds) is observed majorly at the Carolina site which is located in the coastal plain zone (see Figure 48). In the coastal plain zone and Carolina site the Pajuil group represents 100% (n= 163 sherds) of the sample.

Prado Black Group

Although this ceramic group contains bowls with incurved walls and flared neck, the *comal* is the predominant ceramic form. These *comals* were likely modeled on sandy surfaces. Their walls are thin with composite silhouette (or s/z angle) profiles and have predominantly sand temper (Bove 2002:186-187).

The Prado Black group comprises 21.17 % (N= 661) of the total sample. The upper *bocacosta* zone shows a proportion of 19.67% (n= 130 sherds). The Bilbao, El Castillo, and La Gloria 2 sites have the highest frequencies of this group in the upper *Bocacosta* zone. In the coastal plain zone, a proportion of

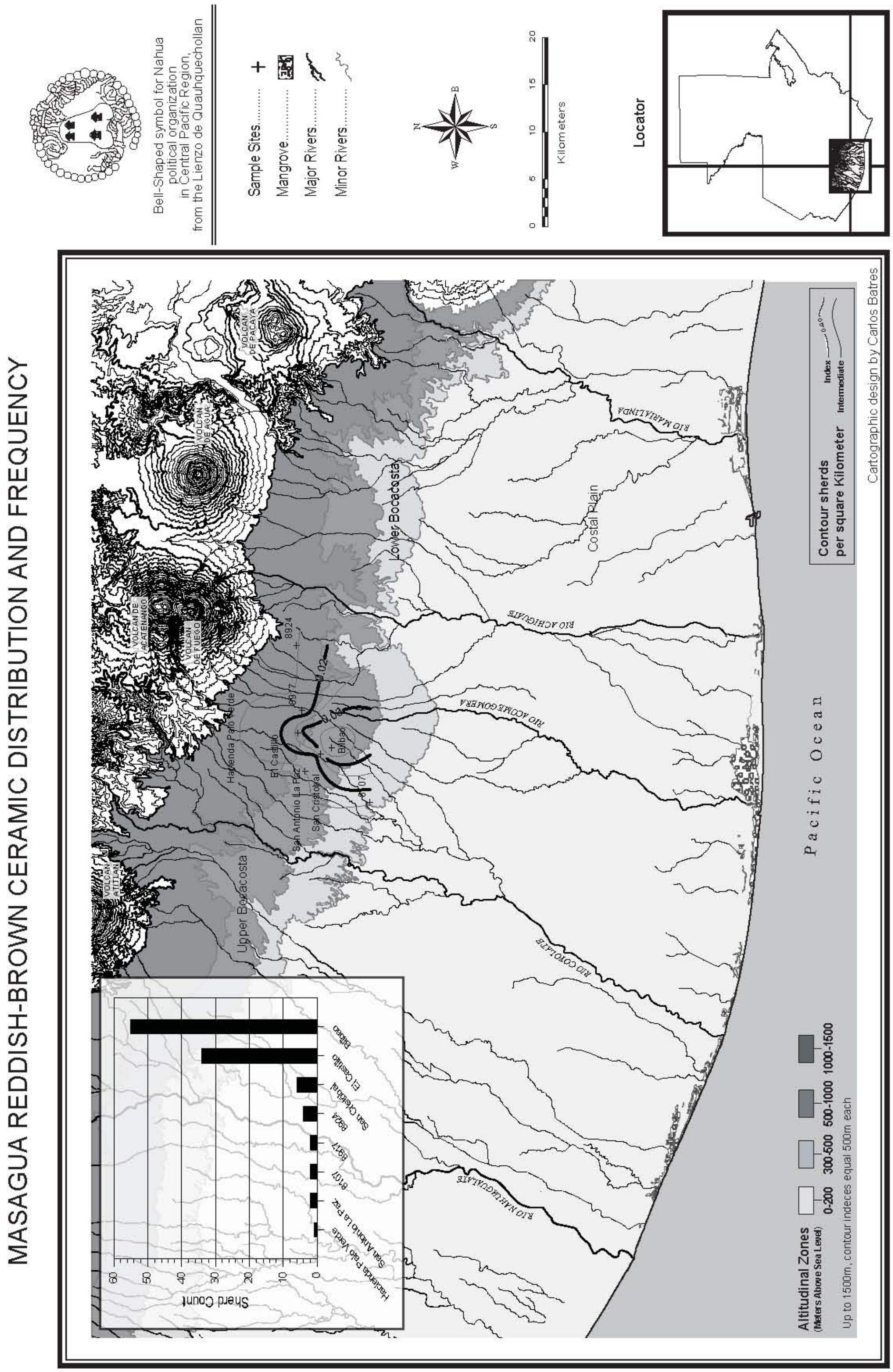


Figure 47: Masagua Reddish-Brown Ceramic Map

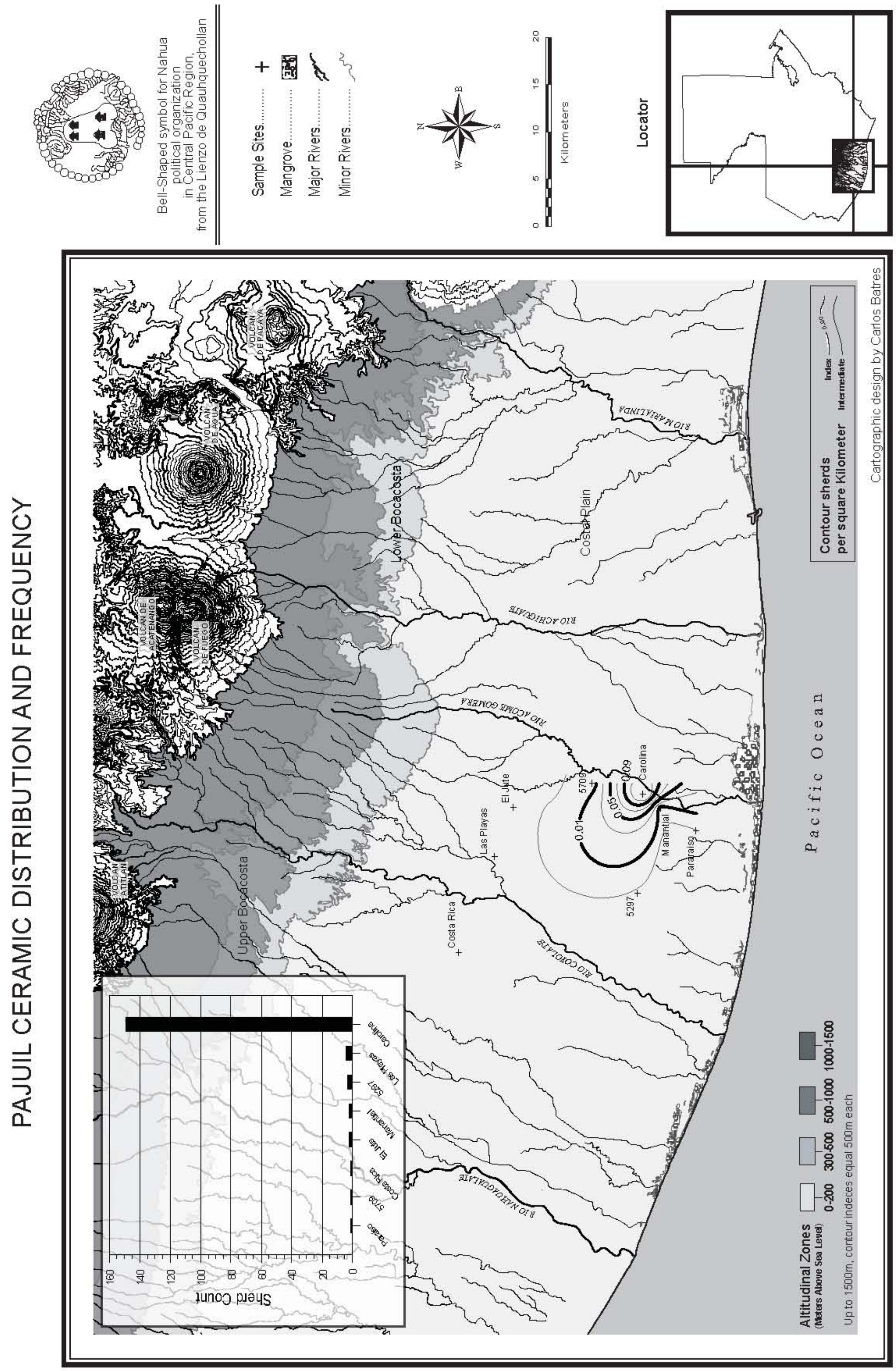


Figure 48: Pajuil Ceramic Map

80.33% (n= 531 sherds) is observed. The major portion of this ceramic group is found at the sites of Carolina, Las Playas, Manantial, Yolanda, and El Jute. Both the distribution and proportion of Prado Black indicate that this ceramic group is not limited to a particular zone exclusively (see Figure 49) however, the coastal plain zone shows the highest proportion.

Remanso Group

This ceramic consists of tripod and *molcajate* (tripod grater bowl) vessels with bird, jaguar, and turtle-head supports. The walls are outcurved or slightly incurved and the surfaces are decorated with red painted designs (e.g., straight, curved, circles, and angular lines, as well as dots) on interiors or exteriors (Bove 2002:187) . The Remanso ceramic group is represented by 15.70 % (N=490 sherds) of the total sample. In the coastal plain zone, the proportion is 96.94% (n= 475 sherds). In this area, the sites of Carolina, Manatial, and Las Playas have the highest frequencies. A negligible 3.06% (n= 15 sherds) of Remanso ceramics appears in the upper *bocacosta* zone. The proportion and distribution of this group indicates that the Remanso ceramic group tends to occur in the coastal plain zone (see Figure 50).

Santa Rita Micaceous Group

The Santa Rita group corresponds to 43.43 % (N= 1,356 sherds) of the total sample. The comal is most common form of this ceramic group. The Santa Rita comales are thick with out-curving walls. Mica is observable on the surface and in the paste (Bove 2002:188).

In the coastal plain zone, only 0.88% (n= 12 sherds) of the Santa Rita ceramic group is represented, in contrast to the 98.75% (n= 1339 sherds) found in the upper *bocacosta* zone, with the highest frequencies at Bilbao,

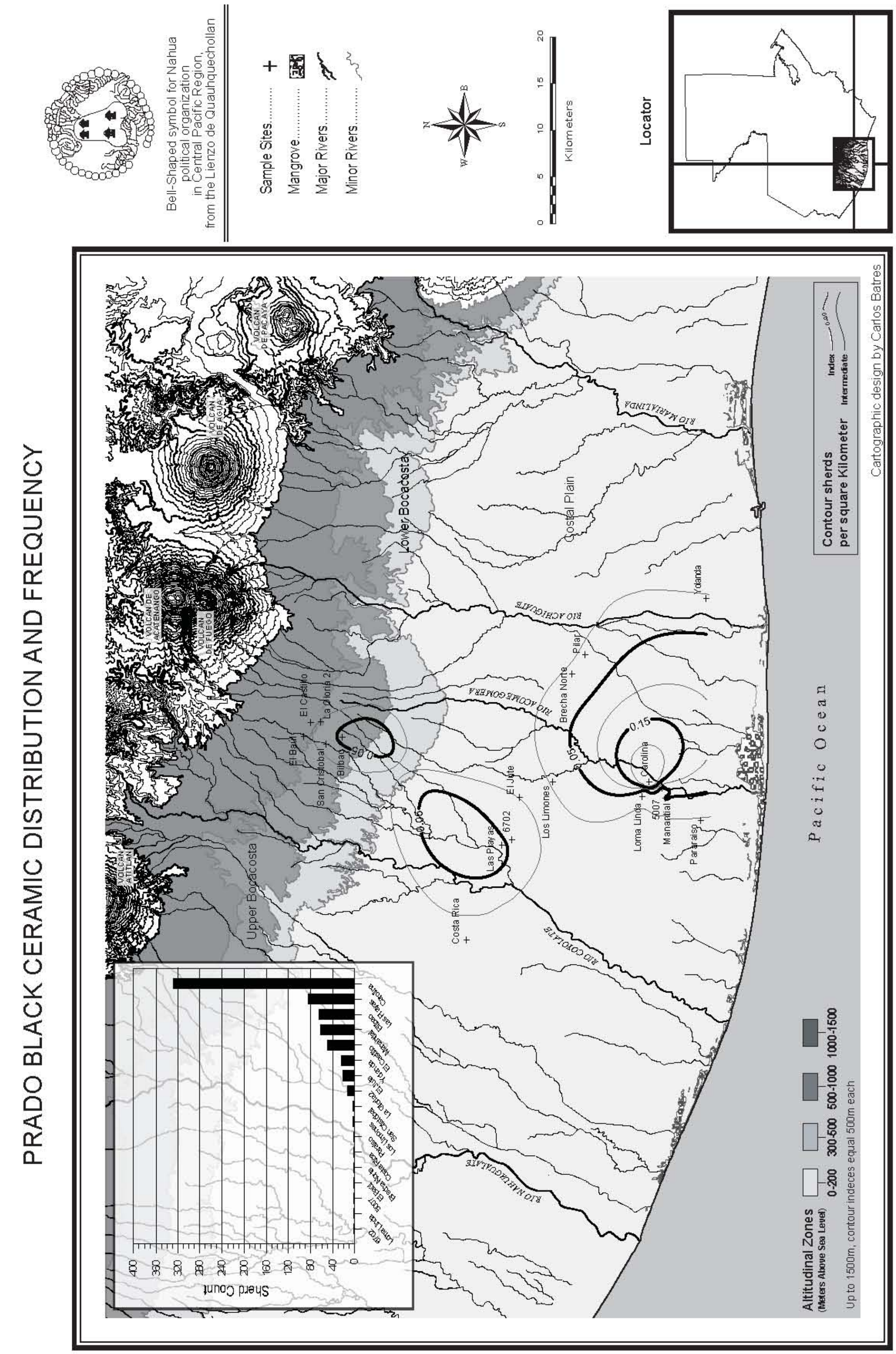


Figure 49: Prado Black Group Ceramic Map

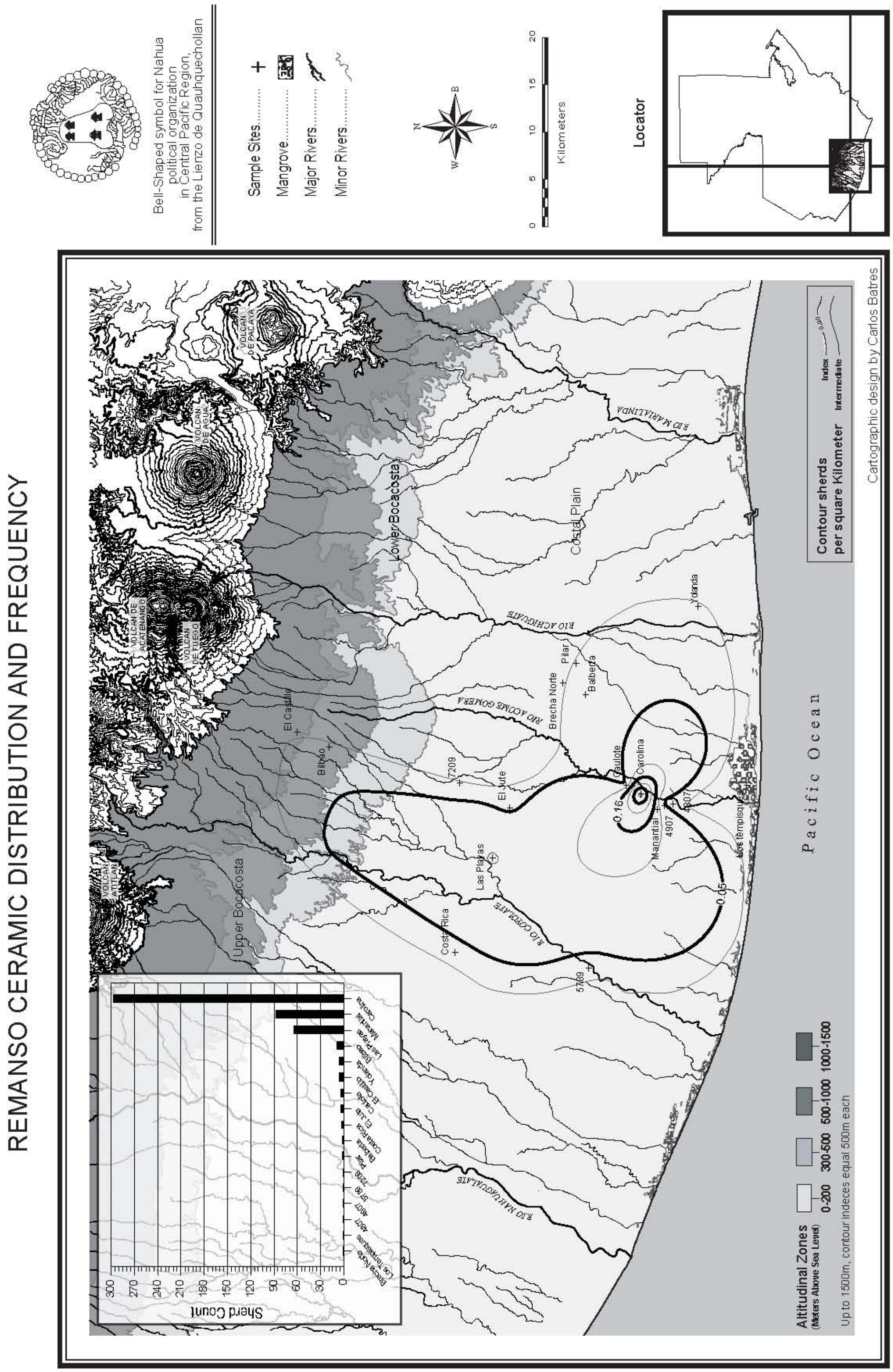


Figure 50: Remanso Group Ceramic Map

El Castillo, San Cristóbal, and La Gloria 2 sites. Like the Masagua Reddish-Brown group, only a small percentage (0.37% n= 5 sherds) of Santa Rita ceramics are represented in the lower *bocacosta* and montane zones. The geographic distribution of the Santa Rita group indicates that this ceramic is quite widespread, but that the highest proportions are found in the upper *bocacosta* zone (see Figure 51).

Sumatan Group

The principal vessel forms of this ceramic group are deep bowls or jars with incurved sides and recurved or flared necks. The surface finish is a polished cinnamon red to reddish brown color (Bove 2002:189). The group corresponds to 6.60 % (N= 206 sherds) of the total sample. In the coastal plain zone, the Sumatan ceramic has a proportion of 99.03% (n= 204 sherds). In this area, the highest frequency is observed at the Carolina site. A scant proportion is observed in the upper *bocacosta*, where the Sumatan ceramic group represents only 0.97% (n= 2 sherds) of the sample. The proportion and distribution of this group indicate that Sumatan's appearance is limited to the coastal plain zone (see Figure 52).

Analysis

The sample of local ceramics throughout the Pacific coast region shows a distribution of 48.78% (N= 1523 sherds) in the Coastal Plain, 50.96% (N= 1591sherds) in the upper *bocacosta*, 0.13% (N= 4 sherds) in the lower *bocacosta*, and 0.013 (N= 4 sherds) in the montane zone (see Figure 53). Santa Rita Micaceous, Prado Black, and Remanso are the most common groups in the ceramic sample (see Table 7).

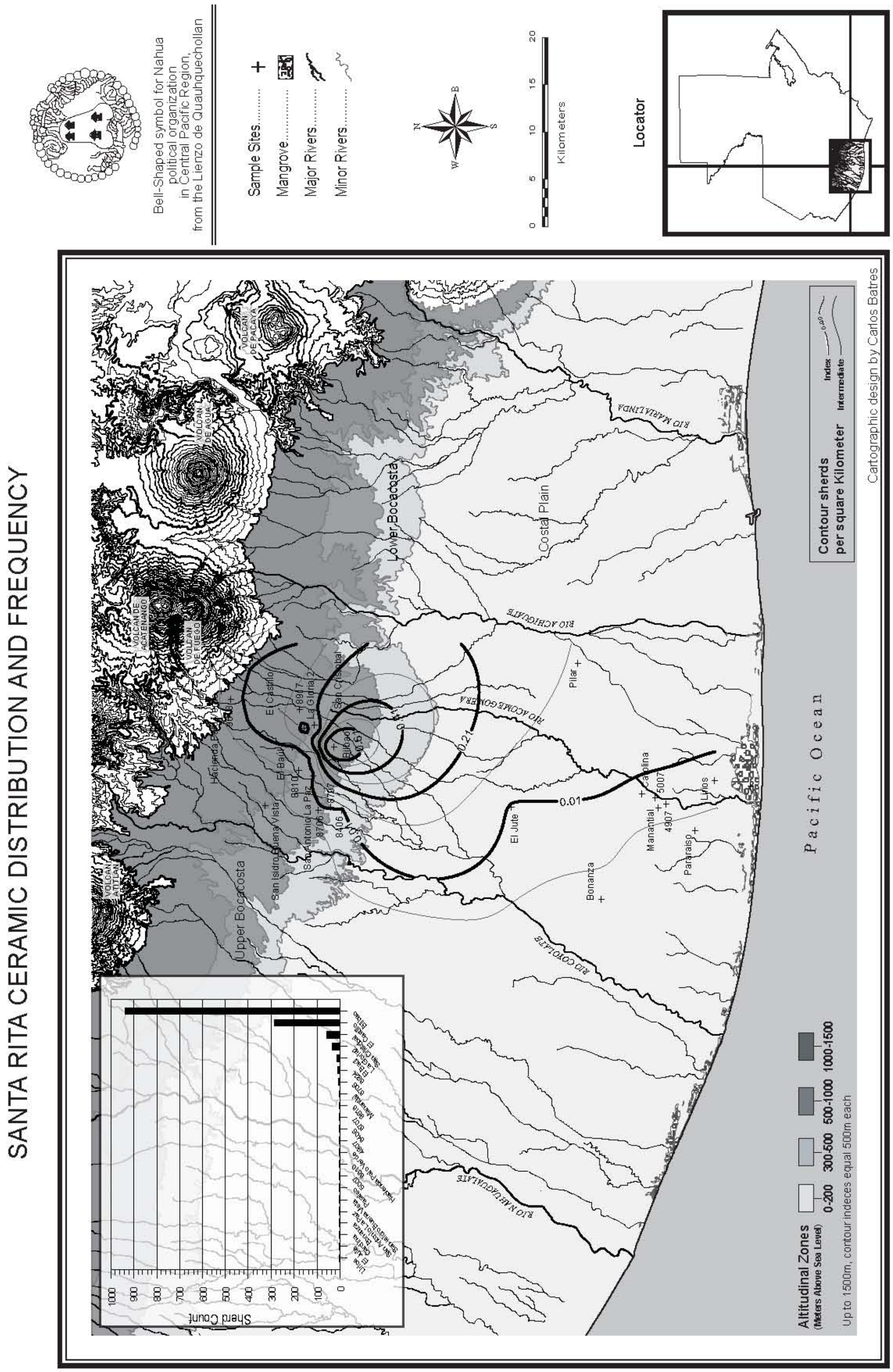


Figure 51: Santa Rita Group Ceramic Map

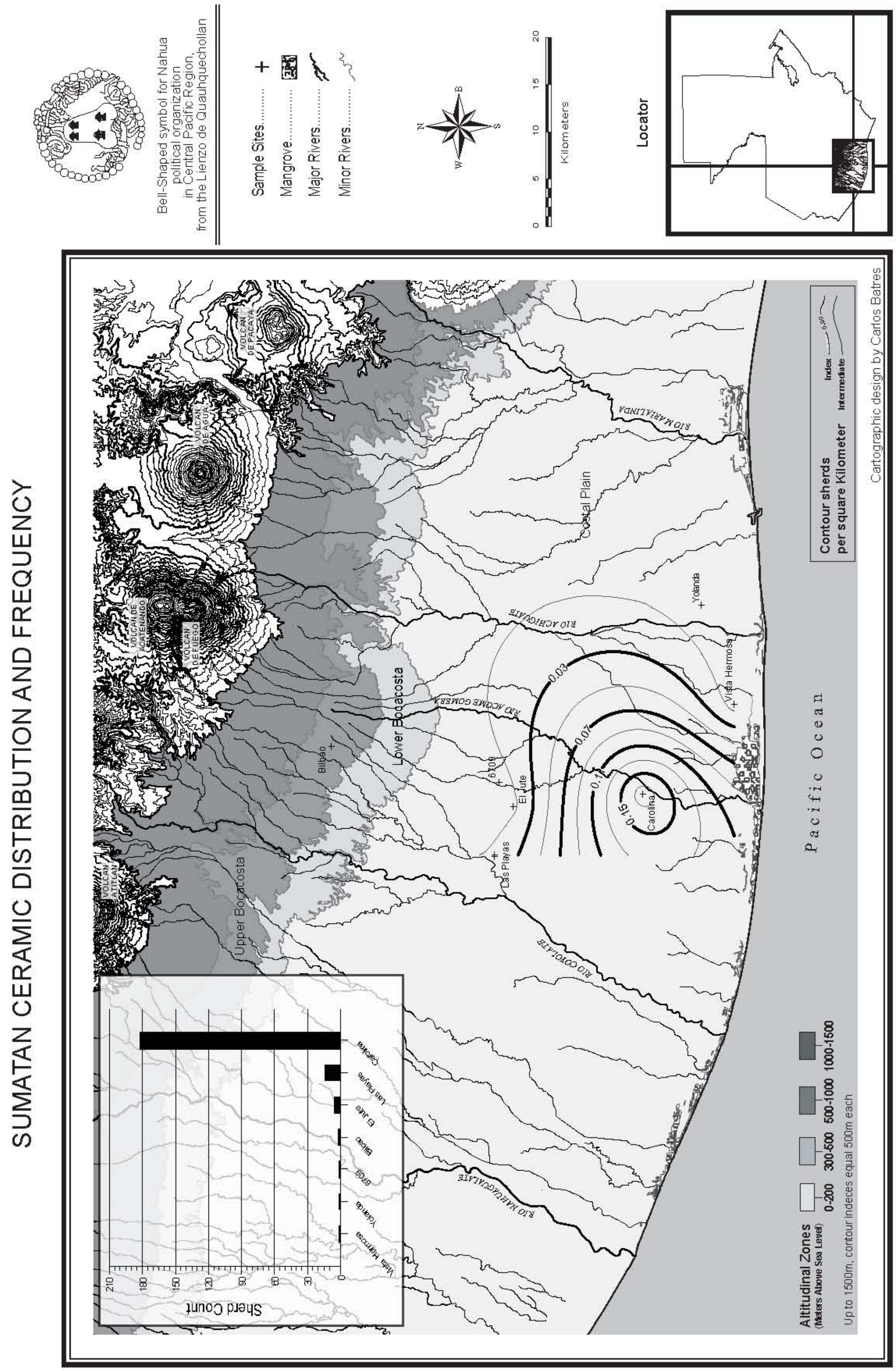


Figure 52: Sumatan Group Ceramic Map

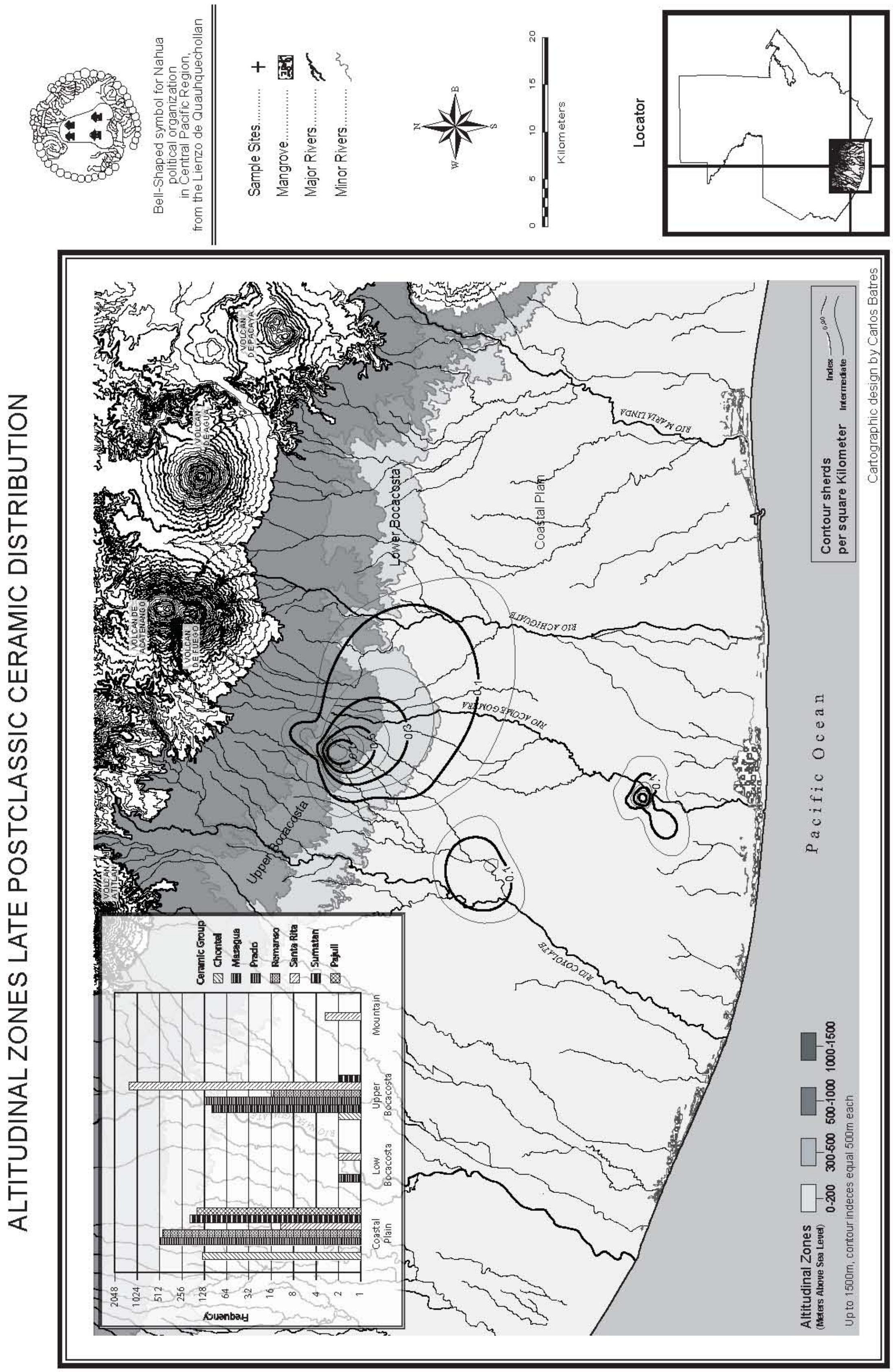


Figure 53: Late Ceramic Groups Distribution by Altitudinal Zones

Ceramic Group	f	%
Santa Rita Micaceous	1356	43.43
Prado Black	661	21.17
Remanso	490	15.70
Sumatan	206	6.60
Pajuil	163	5.22
Chontel Unslipped	140	4.48
Masagua Reddish-Brown	106	3.40
Total	3122	100.00

Table 7: Ceramic Groups Frequencies and Percentages

In the upper *bocacosta* zone, the Santa Rita ceramic group is predominant in frequency. The second highest frequency is found in the Prado Black group, which appears proportionally lower in relation to its regional average. In contrast, the Masagua Reddish-Brown and Santa Rita ceramic groups appear in lower proportions than their regional averages (see Chart 2). The distribution and proportion of these two ceramic groups indicate that they are limited to the upper *bocacosta* zone, although Santa Rita is moderately spread throughout the Pacific coast region.

Lower frequencies are observed for Chontel Unslipped, Remanso, Sumatan and Pajuil groups in the upper *bocacosta*, showing a scant presence of this ceramic in the area (see Table 8). In contrast, these four ceramic groups, and Prado Black, do have significant proportions in the coastal plain zone that are above the average (see Chart 3). In contrast to the upper *bocacosta* zone, the Santa Rita ceramic group is negligible in the coastal plain zone and Masagua Reddish-Brown is absent from the area.

The proportional pattern indicates that the Chontel Unslipped, Pajuil, Prado Black, Remanso, and Sumatan groups have a strong orientation toward the coastal plain zone. The Masagua Reddish-Brown and Santa Rita ceramics are more restricted to the upper *bocacosta* zone. An exception to this general tendency is the Prado Black group that has significant proportions in both areas.

Because of the nature of ceramic data it was used Brainerd-Robinson coefficient[48], as a quantitative measure of the similarity between sites and nucleus in order to explore patterns of similarities o dissimilarities, either site by site or nucleus by nucleus.

Brainerd-Robinson coefficient is a measure scale from 0 (perfect similarity) to 200 (perfect dissimilarity). I the present analysis, this range was divided in

48 The discussion on how to use Brainerd-Robinson coefficient to seriate archaeological site is found in 1951American Antiquity journal.

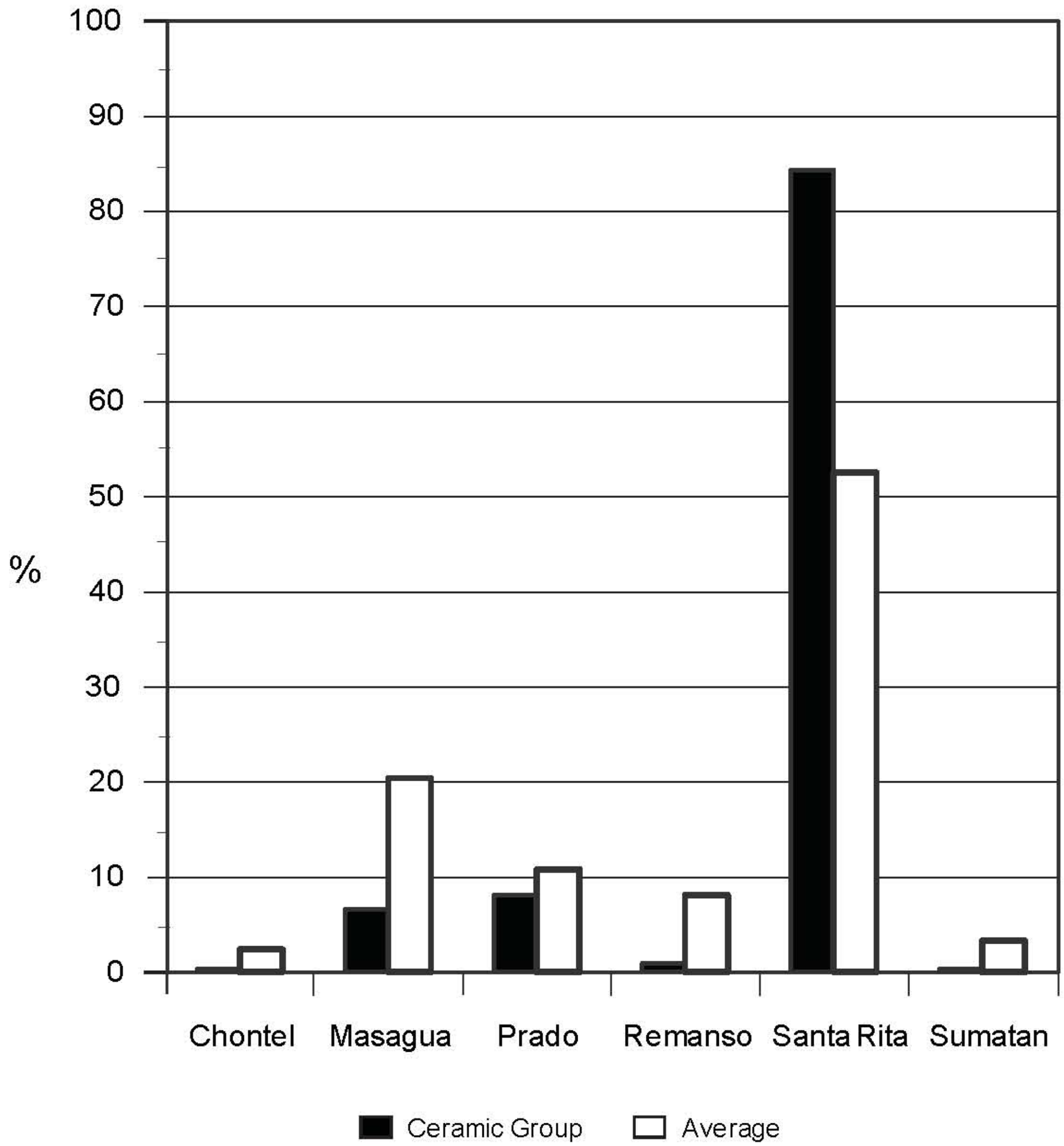


Chart 2: Upper Bocacosta Zone Ceramic Proportions and Averages

Frequencies (f) and Proportions by Ceramic Sample Universe (N%) and Ceramic Group Sample Size (n%)

Ceramic Group	Coastal Plain			Lower Bocacosta			Upper Bocacosta			Mountain		
	f	(N %)	(n%)	f	(N %)	(n %)	f	(N %)	(n %)	f	(N%)	(n %)
Chontel	138	4.42	98.57	0	0.00	0.00	2	0.06	1.43	0	0.00	0.00
Masagua	0	0.00	0.00	2	0.06	1.89	103	3.30	97.17	1	0.03	0.94
Prado Black	531	17.01	80.33	0	0.00	0.00	130	4.16	19.67	0	0.00	0.00
Remanso	475	15.21	96.94	0	0.00	0.00	15	0.48	3.06	0	0.00	0.00
Santa Rita	12	0.38	0.88	2	0.06	0.15	1339	42.89	98.75	3	0.10	0.22
Sumatan	204	6.53	99.03	0	0.00	0.00	2	0.06	0.97	0	0.00	0.00
Pajuil	163	5.22	100.00	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00
Total	1523	48.78		4	0.13		1591	50.96		4	0.13	

Table 8: Frequency and Ceramic Proportion Groups by Altitudinal Zones

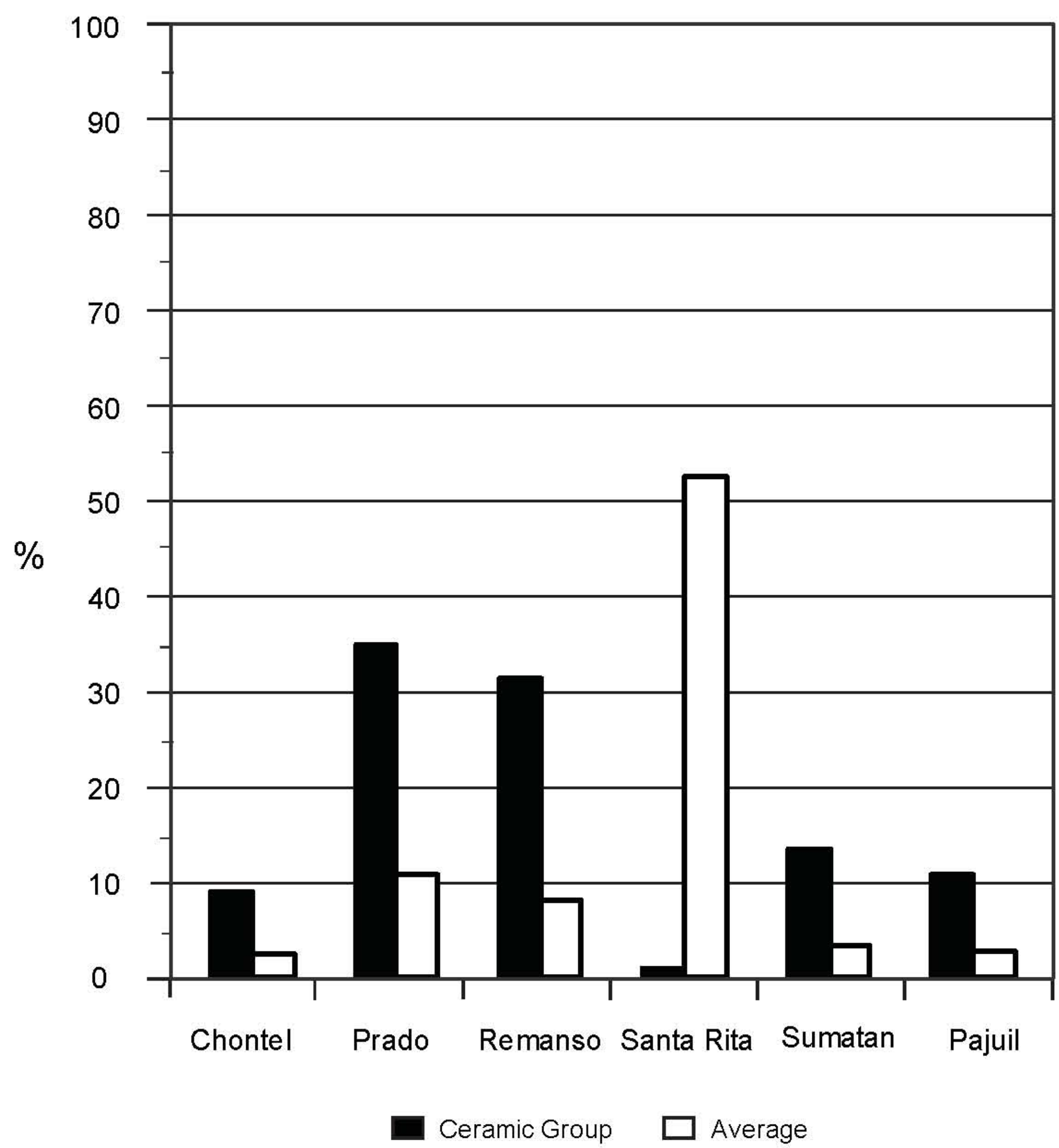


Chart 3: Coastal Plain Zone Ceramic Proportions and Averages

three: 0-51 (strong similarities), 51-75 (moderate similarities), and 75-200 (strong dissimilarities).

Among sites, the Brainerd-Robinson correlation coefficient analysis results in the following proportions. Range one (0-51) the percentage is 15.47% (n = 130 of the correlation possibilities). Range two (51 to 75) is 5.47% (n = 46 of the correlation possibilities). While, the last range (75-200) is 79.06% (n = 665 of the correlation possibilities). Although, the similarities range (0-51) is slightly represented these, the Brainerd-Robinson correlation coefficient show a strong dissimilarities through the sites (see Table 9).

Using the Brainerd-Robinson correlation coefficient (B-R), the nucleus shows the following results. Nucleus 1 is most different from Nuclei 2 (B-R coefficient = 153.52), 3 (B-R coefficient = 126.14), and 5 (B-R coefficient =171.72), but more similar to Nucleus 4 (B-R coefficient = 171.72). Nucleus 2 is different from Nuclei 1 (B-R coefficient = 153.52), 3 (B-R coefficient = 161.11), and 4 (B-R coefficient = 148.72), but similar to number 5 (B-R coefficient = 21.18). Nucleus 3 is different from all Nuclei (B-R coefficient Nucleus 1 = 126.14, Nucleus 2 = 161.11, Nucleus 4= 83.89, and Nucleus 5 = 172.22). While 4 and 1 are moderately or slightly similar to 1 (B-R coefficient = 69.40) and 3 (B-R coefficient = 83.89), they are different from the grouping comprising Nucleus 2 (B-R coefficient = 148.72) and 5 (B-R coefficient = 169.89). Nucleus 5 is different from 1 (B-R coefficient = 171.72), 3 (B-R coefficient = 172.22), and 4 (B-R coefficient = 172.22), but is similar to Nucleus 2 (B-R coefficient = 21.18). Although these numbers show a slightly skewed similarity, the greatest tendencies are the dissimilarities among the nuclei (see Tables 10 and 11).

	S4807	S4907	S5007	S5297	S5709	S5789	S6702	S6709	S7209	S8107	S8406	S8706	S8707	S8810
S4807														
S4907	0													
S5007	0	0												
S5297	0	63	0											
S5709	0	65	43	0										
S5789	0	67	50	100	100									
S6702	0	67	74	150	150	0								
S6709	0	67	83	171	171	0	0							
S7209	88	67	88	180	180	0	0	0						
S8107	100	67	91	190	190	0	45	0	0					
S8406	133	67	95	197	197	0	95	164	0	0				
S8706	140	67	100	197	197	0	100	175	0	0	0			
S8707	142	67	100	200	200	88	100	188	0	67	0	0		
S8810	144	67	100	200	200	100	120	194	88	100	0	0	0	
S8917	161	67	100	200	200	140	127	200	100	138	0	0	0	0
S8924	180	67	100	200	200	142	136	200	140	181	0	0	0	0
S9618	197	67	100	200	200	144	143	200	142	182	0	0	0	0
Balberta	198	100	100	200	200	161	160	200	144	190	0	0	0	0
Bilbao	200	100	100	200	200	180	174	200	161	200	0	0	0	0
Bonanza	200	128	100	200	200	197	183	200	180	200	17	17	17	17
Brecha Norte	200	133	100	200	200	198	188	200	197	200	25	25	25	25
Carolina	200	133	100	200	200	200	191	200	198	200	28	28	28	28
Carlote	200	133	100	200	200	200	200	200	200	200	48	48	48	48
Costa Rica	200	133	100	200	200	200	200	200	200	200	57	57	57	57
El Baul	200	133	100	200	200	200	200	200	200	200	62	62	62	62
El Castillo	200	133	115	200	200	200	200	200	200	200	100	100	100	100
El Jute	200	133	127	200	200	200	200	200	200	200	133	133	133	133
Hacienda Palo Verde	200	133	133	200	200	200	200	200	200	200	150	150	150	150
La Gloria 2	200	140	135	200	200	200	200	200	200	200	195	195	195	195
Las Playas	200	142	160	200	200	200	200	200	200	200	195	195	195	195
Lirios	200	144	200	200	200	200	200	200	200	200	200	200	200	200
Loma Linda	200	150	200	200	200	200	200	200	200	200	200	200	200	200
Los Limones	200	161	200	200	200	200	200	200	200	200	200	200	200	200
Los Tempisques	200	175	200	200	200	200	200	200	200	200	200	200	200	200
Manantial	200	200	200	200	200	200	200	200	200	200	200	200	200	200
Paraiso	200	200	200	200	200	200	200	200	200	200	200	200	200	200
Pilar	200	200	200	200	200	200	200	200	200	200	200	200	200	200
San Antonio La Paz	200	200	200	200	200	200	200	200	200	200	200	200	200	200
San Cristobal	200	200	200	200	200	200	200	200	200	200	200	200	200	200
San Isidro Buena Vista	200	200	200	200	200	200	200	200	200	200	200	200	200	200
Vista Hermosa	200	200	200	200	200	200	200	200	200	200	200	200	200	200
Yolanda	200	200	200	200	200	200	200	200	oa	200	200	200	200	200

	S8917	S8924	S9618	Balberta	Bilbao	Bonanza	Brecha Norte	Carolina	Carlote	Costa Rica	El Baul	El Castillo	El Jute	Hacienda Palo Verde
S8924	0													
S9618	67	0												
Balberta	100	38	0											
Bilbao	138	43	0	0										
Bonanza	181	44	0	0	0									
Brecha Norte	182	51	0	0	8	0								
Carolina	190	62	17	0	13	0	0							
Carlote	200	62	25	88	23	0	20	15						
Costa Rica	200	62	28	100	25	17	61	52	0					
El Baul	200	62	48	140	25	28	71	68	0	10				
El Castillo	200	62	57	142	25	48	77	69	0	45	0			
El Jute	200	62	100	144	45	57	80	75	88	95	17	0		
Hacienda Palo Verde	200	72	133	161	90	100	100	90	140	97	17	20	5	
La Gloria 2	200	150	150	180	123	133	100	106	144	121	19	31	56	0
Las Playas	200	195	195	197	138	150	100	136	161	140	31	48	69	33
Lirios	200	195	195	198	181	195	100	142	180	140	40	48	85	81
Loma Linda	200	200	200	200	181	195	100	142	197	140	100	82	92	100
Los Limones	200	200	200	200	185	200	100	142	200	160	133	115	95	100
Los Tempisques	200	200	200	200	186	200	143	143	200	160	133	124	138	100
Manantial	200	200	200	200	186	200	171	164	200	170	178	165	175	150
Paraiso	200	200	200	200	186	200	183	170	200	183	178	166	180	195
Pilar	200	200	200	200	186	200	191	183	200	191	183	170	180	200
San Antonio La Paz	200	200	200	200	188	200	200	190	200	200	183	171	186	200
San Cristobal	200	200	200	200	198	200	200	200	200	200	183	174	195	200
San Isidro Buena Vista	200	200	200	200	198	200	200	200	200	200	200	197	195	200
Vista Hermosa	200	200	200	200	198	200	200	200	200	200	200	197	195	200
Yolanda	200	200	200	200	200	200	200	200	200	200	200	200	195	200

	La Gloria 2	Las Playas	Lirios	Loma Linda	Los Limones	Los Tempisques	Manantial	Paraiso	Pilar	San Antonio La Paz	San Cristobal	San Isidro Buena Vista	Vista Hermosa	Yolanda
Las Playas	0													
Lirios	48	2												
Loma Linda	57	69	0											
Los Limones	57	82	0	0										
Los Tempisques	93	123	28	45	45									
Manantial	133	127	133	100	100	0								
Paraiso	138	144	150	120	120	88	81							
Pilar	143	144	195	191	191	161	88	100						
San Antonio La Paz	143	188	200	200	200	200	112	141	161					
San Cristobal	143	191	200	200	200	200	185	150	200	115				
San Isidro Buena Vista	200	200	200	200	200	200	195	150	200	133	28			
Vista Hermosa	200	200	200	200	200	200	195	200	200	200	191	200		
Yolanda	200	200	200	200	200	200	200	200	200	200	200	200	194	

0.0 - 50.00 = ☐ Strong Similarities
51.00 - 75.00 = ■ Moderate Similarities
76.00 - 200.00 = ▒ Strong Dissimilarities

Table 9: Brainerd-Robinson Similarity Coefficient among Ceramic Site Samples

Brainerd-Robinson Similarity Coefficient Nucleus 1

Group	Nucleus 1	Nucleus 2	
CHONTEL	36.36364	4.87804878	31.48559
MASAGUA	0	4.403794038	4.403794
PRADO	18.18182	12.66937669	5.512441
REMANSO	36.36364	5.284552846	31.07908
SANTARITA	0	70.86720867	70.86721
SUMATAN	0	1.490514905	1.490515
PAJUIL	9.090909	0.406504065	8.684405
		B-R	153.523

Group	Nucleus 1	Nucleus 3	
CHONTEL	36.36364	0	36.36364
MASAGUA	0	0	0
PRADO	18.18182	75	56.81818
REMANSO	36.36364	18.75	17.61364
SANTARITA	0	0	0
SUMATAN	0	6.25	6.25
PAJUIL	9.090909	0	9.090909
		B-R	126.1364

Group	Nucleus 1	Nucleus 4	
CHONTEL	36.36364	5.219553	31.14408
MASAGUA	0	0	0
PRADO	18.18182	33.05717	14.87535
REMANSO	36.36364	32.80862	3.55502
SANTARITA	0	0.91135	0.91135
SUMATAN	0	15.07871	15.07871
PAJUIL	9.090909	12.92461	3.833697
		B-R	69.39821

Group	Nucleus 1	Nucleus 5	
CHONTEL	36.36364	0.252525	36.11111
MASAGUA	0	10.35354	10.35354
PRADO	18.18182	12.37374	5.808081
REMANSO	36.36364	1.515152	34.84848
SANTARITA	0	75.50505	75.50505
SUMATAN	0	0	0
PAJUIL	9.090909	0	9.090909
		B-R	171.7172

Group	Nueus2	Nucleus 1	
CHONTEL	36.36364	4.878049	31.48559
MASAGUA	0	4.403794	4.403794
PRADO	18.18182	12.66938	5.512441
REMANSO	36.36364	5.284553	31.07908
SANTARITA	0	70.86721	70.86721
SUMATAN	0	1.490515	1.490515
PAJUIL	9.090909	0.406504	8.684405
		B-R	153.523

Brainerd-Robinson Similarity Coefficient Nucleus 2

Group	Nucleus 2	Nucleus 3	
CHONTEL	4.878049	0	4.878049
MASAGUA	4.403794	0	4.403794
PRADO	12.66938	75	62.33062
REMANSO	5.284553	18.75	13.46545
SANTARITA	70.86721	0	70.86721
SUMATAN	1.490515	6.25	4.759485
PAJUIL	0.406504	0	0.406504
		B-R	161.1111

Group	Nucleus 2	Nucleus 4	
CHONTEL	4.878049	5.219553	0.341504
MASAGUA	4.403794	0	4.403794
PRADO	12.66938	33.05717	20.38779
REMANSO	5.284553	32.80862	27.52406
SANTARITA	70.86721	0.91135	69.95586
SUMATAN	1.490515	15.07871	13.58819
PAJUIL	0.406504	12.92461	12.5181
		B-R	148.7193

Group	Nucleus 2	Nucleus 5	
CHONTEL	4.878049	0.252525	4.625524
MASAGUA	4.403794	10.35354	5.949741
PRADO	12.66938	12.37374	0.295639
REMANSO	5.284553	1.515152	3.769401
SANTARITA	70.86721	75.50505	4.637842
SUMATAN	1.490515	0	1.490515
PAJUIL	0.406504	0	0.406504
		B-R	21.17517

Group	Nucleus 3	Nucleus 1	
CHONTEL	0	36.36364	36.36364
MASAGUA	0	0	0
PRADO	75	18.18182	56.81818
REMANSO	18.75	36.36364	17.61364
SANTARITA	0	0	0
SUMATAN	6.25	0	6.25
PAJUIL	0	9.090909	9.090909
		B-R	126.1364

Group	Nucleus 3	Nucleus 2	
CHONTEL	4.878049	0	4.878049
MASAGUA	4.403794	0	4.403794
PRADO	12.66938	75	62.33062
REMANSO	5.284553	18.75	13.46545
SANTARITA	70.86721	0	70.86721
SUMATAN	1.490515	6.25	4.759485
PAJUIL	0.406504	0	0.406504
		B-R	161.1111

Brainerd-Robinson Similarity Coefficient Nucleus 3

Group	Nucleus 3	Nucleus 4	
CHONTEL	0	5.219553	5.219553
MASAGUA	0	0	0
PRADO	75	33.05717	41.94283
REMANSO	18.75	32.80862	14.05862
SANTARITA	0	0.91135	0.91135
SUMATAN	6.25	15.07871	8.828708
PAJUIL	0	12.92461	12.92461
		B-R	83.88567

Group	Nucleus 3	Nucleus 5	
CHONTEL	0	0.252525	0.252525
MASAGUA	0	10.35354	10.35354
PRADO	75	12.37374	62.62626
REMANSO	18.75	1.515152	17.23485
SANTARITA	0	75.50505	75.50505
SUMATAN	6.25	0	6.25
PAJUIL	0	0	0
		B-R	172.2222

Group	Nucleus 4	Nucleus 1	
CHONTEL	5.219553	36.36364	31.14408
MASAGUA	0	0	0
PRADO	33.05717	18.18182	14.87535
REMANSO	32.80862	36.36364	3.55502
SANTARITA	0.91135	0	0.91135
SUMATAN	15.07871	0	15.07871
PAJUIL	12.92461	9.090909	3.833697
		B-R	69.39821

Group	Nucleus 4	Nucleus 2	
CHONTEL	5.219553	4.87804878	0.341504
MASAGUA	0	4.403794038	4.403794
PRADO	33.05717	12.66937669	20.38779
REMANSO	32.80862	5.284552846	27.52406
SANTARITA	0.91135	70.86720867	69.95586
SUMATAN	15.07871	1.490514905	13.58819
PAJUIL	12.92461	0.406504065	12.5181
		B-R	148.7193

Group	Nucleus 4	Nucleus 3	
CHONTEL	0	5.219553	5.219553
MASAGUA	0	0	0
PRADO	75	33.05717	41.94283
REMANSO	18.75	32.80862	14.05862
SANTARITA	0	0.91135	0.91135
SUMATAN	6.25	15.07871	8.828708
PAJUIL	0	12.92461	12.92461
		B-R	83.88567

Brainerd-Robinson Similarity Coefficient Nucleus 4

Group	Nucleus 4	Nucleus 5	
CHONTEL	5.219553	0.252525	4.967027
MASAGUA	0	10.35354	10.35354
PRADO	33.05717	12.37374	20.68343
REMANSO	32.80862	1.515152	31.29346
SANTARITA	0.91135	75.50505	74.5937
SUMATAN	15.07871	0	15.07871
PAJUIL	12.92461	0	12.92461
		B-R	169.8945

Group	Nucleus 5	Nucleus 1	
CHONTEL	0.252525	36.36364	36.11111
MASAGUA	10.35354	0	10.35354
PRADO	12.37374	18.18182	5.808081
REMANSO	1.515152	36.36364	34.84848
SANTARITA	75.50505	0	75.50505
SUMATAN	0	0	0
PAJUIL	0	9.090909	9.090909
		B-R	171.7172

Group	Nucleus 5	Nucleus 2	
CHONTEL	0.252525	4.87804878	4.625524
MASAGUA	10.35354	4.403794038	5.949741
PRADO	12.37374	12.66937669	0.295639
REMANSO	1.515152	5.284552846	3.769401
SANTARITA	75.50505	70.86720867	4.637842
SUMATAN	0	1.490514905	1.490515
PAJUIL	0	0.406504065	0.406504
		B-R	21.17517

Group	Nucleus 5	Nucleus 3	
CHONTEL	0.252525	0	0.252525
MASAGUA	10.35354	0	10.35354
PRADO	12.37374	75	62.62626
REMANSO	1.515152	18.75	17.23485
SANTARITA	75.50505	0	75.50505
SUMATAN	0	6.25	6.25
PAJUIL	0	0	0
		B-R	172.2222

Group	Nucleus 4	Nucleus 5	
CHONTEL	5.219553	0.252525	4.967027
MASAGUA	0	10.35354	10.35354
PRADO	33.05717	12.37374	20.68343
REMANSO	32.80862	1.515152	31.29346
SANTARITA	0.91135	75.50505	74.5937
SUMATAN	15.07871	0	15.07871
PAJUIL	12.92461	0	12.92461
		B-R	169.8945

Brainerd-Robinson Similarity Coefficient Nucleus 5

Table 10: Brainerd-Robinson Similarity Coefficient by Settlement Nucleus Ceramic Groups

Site		Costa Rica	Las Playas	Gomera/Carolina	Yolanda	Izcuintepeque
		N-1	N-2	N-3	N-4	N-5
Costa Rica	N-1		sd	sd	ms	sd
Las Playas	N-2	sd		sd	sd	ss
Gomera/Carolina	N-3	sd	sd		ms	sd
Yolanda	N-4	ms	sd	ms		sd
Izcuintepeque	N-5	sd	ss	sd	sd	

ss = Strong Similarities
md = Moderate Similarities
sd = Strong Dissimilarities
N-1 = Nucleus

Table 11: Brainerd-Robinson Similarity Coefficient Correlation Results by Nuclei Areas

Discussion

Comparing the ceramic forms of Santa Rita Micaceous and Masagua Reddish-Brown and the abundance of mica in the paste and surface, Bove *et al.* (2004) argues that there are some similarities between these groups and others from the highlands. He found that the form of Masagua Reddish-Brown Comales is similar to those of the highlands that were reported from the Kaqchikel Maya centers of Chitak Tzak, Iximche, and the Antigua basin. However, they are distinct from Prado Black Comales from the coastal plain zone (Bove, *et al.* 2004:13).

Santa Rita *comales* have micaceous and soapy finishes with small quantities of sand in the temper. This ceramic group is comparable to the micaceous wares of the highland region (Bove 2002:188; Bove, *et al.* 2004:13). In the highlands, micaceous ceramics are widespread, and appear in the highest frequencies (Navarrete 1962; Robinson 1994, 1998; Wauchope 1970) . Ten sherds of Masagua Reddish-Brown and twenty-two of Santa Rita Micaceous were analyzed by Instrumental Neutron Activation (INAA) at the University of Missouri Research Reactor (MURR) laboratories (Bove, *et al.* 2004:13). This analysis indicated that the source area of materials is found in the upper *bocacosta* zone. These data coincide with Santa Rita Micaceous and the Masagua Reddish-Brown groups' tendency to be restricted to this zone, and also with the shared characteristics that ties micaceous ceramic group has with the nearby highlands. In addition, the moderate proportion of Santa Rita in the coastal plain zone suggests that this group was imported from the upper *bocacosta* zone.

The Sumatan ceramic group shares similarities with the micaceous wares of the Maya highland region (Parsons 1967). In the highland sites (e.g., Mixco

Viejo, Chuitinamit, Zaculeu, and Chitak Tzak), the Sumatan group is sometimes called Hilltop Cinnamon and is comparable to wares such as *Cerámica roja pulida* (red polished ceramic), Red Ware, Monochrome Red, Tan, Brown ware, and Cinnamon Monochrome Cremation Jars (see Lothrop 1933; Navarrete 1962; Robinson 1994, 1998; Wauchope 1970; Woodbury and Trik 1953). Interestingly, this ceramic type is scarce in the nearby highlands of the upper *bocacosta* zone but proportionally frequent in the coastal plain zone. The micaceous characteristics and scarcity of the group in the upper *bocacosta* zone suggest that the Sumatan group was imported directly from the highland region to the coastal plain zone.

A sample of eleven Prado Black sherds from the coastal plain zone and four from the upper *bocacosta* analyzed by INAA indicate that the material's source area is found in the coastal plain and near the site of Carolina (Bove, *et al.* 2004:12). At this site, the Prado Black ceramic group is proportionally higher than other sites of the coastal plain zone. It is inferred that this site was the production center of Prado Black ceramics. The significant proportion of the Prado Black group observed in the upper *bocacosta* combined with the INAA results suggests that Prado Black ceramics were imported from the coastal plain zone, perhaps from the inferred Carolina site, into the upper *bocacosta* zone.

Remanso, Chontel Unslipped, and Pajuil groups are found in considerable proportions and frequencies in nearly all coastal plain sites but their presence is either negligible or completely absent in the upper *bocacosta* zone (with the exception of the Remanso group). The decorative traits of Remanso (red colors and zoomorphic effigy head supports in the form of feline, turtle, and bird designs) are not exclusive to the coastal plain zone. This decoration is observed in some ceramic wares that are widespread throughout the Pacific coast corridor and Maya highlands. The greatest differences are found in the composition

of paste, vessel forms, and surface treatment (Vicente Genovez, personal communication 2007), which may indicate local production of wares normally produced in other regions such as the Maya highlands.

The Santa Rita and Masagua Reddish-Brown ceramic data indicate that these groups have material sources in the upper *bocacosta* zone. They also demonstrate a tendency to be restricted to this region. Additionally, they share characteristic traits with wares of the highland region.

The distribution and proportion patterns of the Prado Black, Remanso, Chontel Unslipped, and Pajuil are largely confined to the coastal plain zone and almost certainly related to the Nahua-Pipil people. Although the Remanso ceramic group shares some decorative elements (e.g., zoomorphic effigy head support) that are not exclusive to the coastal plain zone, these similarities are indicative of the use of generalized interregional decorations on locally produced ceramics (Vicente Genovez, personal communication 2007). The Prado Black group was produced by the coastal plain zone inhabitants. The INAA results indicated that the material source for this ceramic was located near the Carolina site, which was a Nahua-Pipil center. While the Sumatan ceramic group shares traits with ceramic wares from the highland regions, it is found in largest proportions in the coastal plain zone. The decorative style of this ceramic group was widespread among many groups including the Nahua-Pipil of coastal plain zone. It is possible to suggest that the use of these decorative features is indicative of the exchange of ceramics of different styles from different regions.

As was observed, the ceramic remains reveal the particular zones from where they are derived (e.g., coastal plain or *bocacosta*), as well as the network through which they flowed throughout the central Pacific coast. In this regard, the dissimilarities or variations observed in the results of the Brainerd-Robinson correlation coefficient analysis might be related to this ceramic flow. Of course,

factors such as the Thiessen polygon circumscriptions and the lack of uniformity in the sample, as well as the natural dispersion of the ceramic sample might also account for these variations. An interpretation regarding the flow of ceramics trough sites and nucleated areas is an acceptable answer due to the nature of the ceramic sample used in this sample.

Summary

The proportion and distribution of the Ixtacapa phase ceramics indicates that during the Late Postclassic period in the central Pacific coast region, three areas participated in the production and distribution of this complex. The Prado Black ceramic was produced in the coastal plain zone, Santa Rita Micaceous and Masagua Reddish-Brown in the upper *bocacosta* zone, and Sumatan in the highlands. Regionalized production of Ixtacapa phase ceramics is also indicated by the idiosyncratic way in which comales (the principal utilitarian domestic form of Prado Black, Masagua Reddish-Brown, and Santa Rita Micaceous groups), varied in their paste, size, and design attributes (Vicente Genovez, personal communication 2007).

The flow and preferences of these ceramic types might be associated with the differences and variations observed among the sites and nucleated site clusters. As was mention in the preceding Chapter 6, site plans also show the comparable difference and variation tendencies. The possible implication of such will be discussed in the following chapter.

CHAPTER VIII.
DISCUSSION AND CONCLUSION

This chapter is a synthesis of the data presented from this investigation. It is divided into two parts. The first part discusses chronological issues of the early Nahua-Pipil settlements in the central Pacific coast, finding some correlations between the Nahua-Pipil archaeological sites and Nahuatl-speaking towns that were recorded during the Early Colonial period. In addition, the level to which these settlements can be associated to *altepetl* structure is also explored. The variability of the Nahau-Pipil site plan is discussed in terms of ethnical interactions while the management of resources is discussed with regard to the role of each resource.

The second part presents conclusions about the *altepetl* structure that is reflected in the Nahua-Pipil sites. This section also includes a proposition about early and recent proposals regarding the origin of the Nahua-Pipil ethnical group and their migration. A conclusion about the theoretical implications reflected in the construction of Nahua-Pipil space is discussed. Final segment discusses the implications of the use of GIS as a tool for manipulation and data analysis.

Chronological Consideration

It has been proposed that the Nahuatl-speakers arrived to southern Mesoamerica during the Terminal Classic and Early Postclassic periods[49].

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49 This proposal is based on the existence of Early Postclasic Nahua-Pipil settlements in western side of El Salvador.

However, in the Guatemalan central Pacific coast both periods have interesting characteristics that challenge this proposal.

Extensive archaeological works have demonstrated that during Terminal Classic period, the central Pacific coast region was densely populated. Major centers including the sites of Bilbao, El Castillo, and El Baúl reached their peak in the piedmont or Cotzumalguapa Nuclear Zone. The Balberta, Montana, and Manatial-Los Chatos sites were dominant political centers in the coastal plain zone. In these areas, archaeological evidence indicates the localized development of settlements. Strong intra- and extra-regional commerce interactions are found in conjunction with high population densities. The numerous centers along with evidence of commercial interchange with near and distant regions reveal some social dynamics of the inhabitants of the Central Pacific coast during the Terminal Classic period. Apart from these assumptions, the archaeological record does not facilitate discussions of foreign intrusions or the effects of such on local inhabitants[50].

Unlike the Terminal Classic, the Early Postclassic period is marked by a major population hiatus (Bove 2002:15; Bove, *et al.* 2004). There is a notable lack of archaeological sites that date to the Early Postclassic period. This evidence inspires far more questions than answers.

While investigations focused on the Postclassic period are lacking, there are also difficulties in recognizing the temporal changes during this period. Additionally, methods and research tools used in the region are not particularly helpful for the identification of Early Postclassic remains in relation general Postclassic evidence (Bove, *et al.* 2004:15). Due to evidence of depopulation,

50 One proposal posits that there were consequences to Nahua-Pipil movement to central Pacific coast during the Terminal Classic period. It is suggested that the Early Postclassic Salvadorian Nahual-Pipil caused the downfall of Cotzumalguapa centers ca A.D. 1000-1100 (Chinchilla Mazariegos 1996:548; Fowler 1989a:38). However, specific or direct evidence to confirm this proposal is unknown. Likewise, the types of relationships between Nahuatl-speakers and Terminal classic Cotzumalguapa inhabitants remain obscure.

the Early Postclassic period is not only an obscure period to the archaeology of the region, but an equally difficult period in which to consider foreign intrusion. It is during the subsequent period when the archaeological record shows new settlements that have been identified as Nahua-Pipil.

The ceramics discussed in Chapter 5 are the primary archaeological records of the Late Postclassic in central Pacific region. Stratigraphic sequences observed in excavations of Nahua-Pipil sites revealed that they were built on areas without previous occupation or local antecedents (Bove and Genoves personal communication). Radiocarbon dates, from Carolina and Costa Rica, indicate date ranges from A.D. 1299 to A.D. 1446 (see table 12). This chronological framework circumscribes the archaeological evidences of the Late Postclassic period, and confirms that new settlers were in the region.

In sum, Terminal Classic and Early Postclassic Nahua-Pipil intrusion in the central Pacific region is questionable based on two primary features: 1). The Terminal Classic is characterized by a sustained and dense population while the Early Postclassic shows an intriguing depopulation, and 2) both periods lack adequate archaeological evidence of the Nahua-Pipil. It is only during the Late Postclassic period when evidence clearly permits discussions of the Nahua-Pipil populations in the south Pacific coast region, and their social organization hypothesized to be based on the *altepetl* system.

Early Colonial Nahuatl-towns and Sites Correlation

During and after Spanish conquest, the ethnohistorical documents describe several towns in the central Pacific coast region that were inhabited by Mexican language-speakers (see table 13 and see Figure 54)). Although the inhabitants of these Indigenous towns were moved during post-Conquest and Colonial

Table 12: Radiocarbon Dates (courtesy of Fred Bove)

Laboratory No.	Site	Lot No.*	^{14}C age years BP**	(95.4%) 2δ Calib A.D. age ranges***	Relative Area Under Distribution
AA60822	Carolina	C13-1-06-06	566±42	A.D. 1299-1370 A.D. 1381-1432	0.57653 0.42347
AA60821	Carolina	C13-1-08-06	519±38	A.D. 1318-1353 A.D. 1389-1446	0.190279 0.809721
AA60824	Carolina	C20-1-05-05	676±38	A.D. 1267-1324 A.D. 1345-1354	0.575332 0.424668
AA60823	Costa Rica	CR-04-1	522±38	A.D. 1317-1354 A.D. 1389-1446	0.213563 0.786437

* All samples are charcoal

** All dates are AMS dates and corrected for isotopic fractionation

*** Calibrated at 2δ with the program CALIB 5.0

INDIGENOUS NAME	MEANING	SAPNISH_NAME	MODERN NAME	LANGUAGE
Aguacatepetl	Hill of Avocados	San Pedro	San Pedro Aguacatepeque	Nahuatl/Kaqchikel
Alotepetl	Hill of Parrots	San Juan	San Juan Alotepeque	Nahuatl/Kaqchikel
Amayuca			Amayuca	Nahuatl
Popocatepeque	Smoking Hill	Asunción	Asunción Popocatepeque	Nahuatl
Cacaoatlán	Place of Cacao		Cacaoatlán	Nahuatl
Chiagüites	Sprinkling or Pouring	San Sebastián	San Sebastián Chiagüites	Nahuatl
Chipilapa	River of Chipilli	San Pedro	San Pedro Chipilapa	Nahuatl
Cosamaluapan	Rainbow River	San Cristóbal	San Cristóbal Cosamaloapan	Nahuatl
Cosamaluapan	Rainbow River	Santa Lucia	Santa Lucia Cosamaloapan	Kaqchikel
Cosamaluapan	Rainbow River	Santiago	Santiago Cosamaloapan	Nahuatl/Kaqchikel
		Don García	Don García	Nahuatl
Itzcuintepec	Hill of Dogs	Concepción Escuintla	Concepción Escuintla	Nahuatl
		Villa de la Gómera	Villa de la Gómera	Nahuatl
Ichanhuëhuë	Near the Old	San Francisco	San Francisco Ichanhuëhuë	Nahuatl
Ichanutzuma	House of High	San Andrés	San Andrés Ichanosuma	Nahuatl/Kaqchikel
Iztapa	Salt River		Iztapa	Nahuatl
Masagua	Place of Deer	San luis	San Luis Masagua	Nahuatl
Miguatlán	Place of Corn Tassel and Flower		Miguatlán	Nahutl/Tzutujil
Mixtán	Place of Lions	Santa Ana	Santa Ana Mixtán	Nahuatl
Utanzingo	Little Bamboo Hill		Utanzingo	Nahuatl
Tehuantepec	Hill of the Wild Beast	San Miguel	San Miguel Tehuantepec	Nahuatl
Texcuaco	cave, coati, serpent, or Cave of the Serpent	San Francisco	San Francisco Texcuaco	Nahuatl
Popocatepeque	Smoking Hill	Asunción	Asunción Popocatepeque	Nahuatl
Guanagazapa	?		Guanagazapa	Nahuatl

Table 13: Nahuatl-speaking Towns Recorded During the Early Colonial Period (based in Orellana 1995)

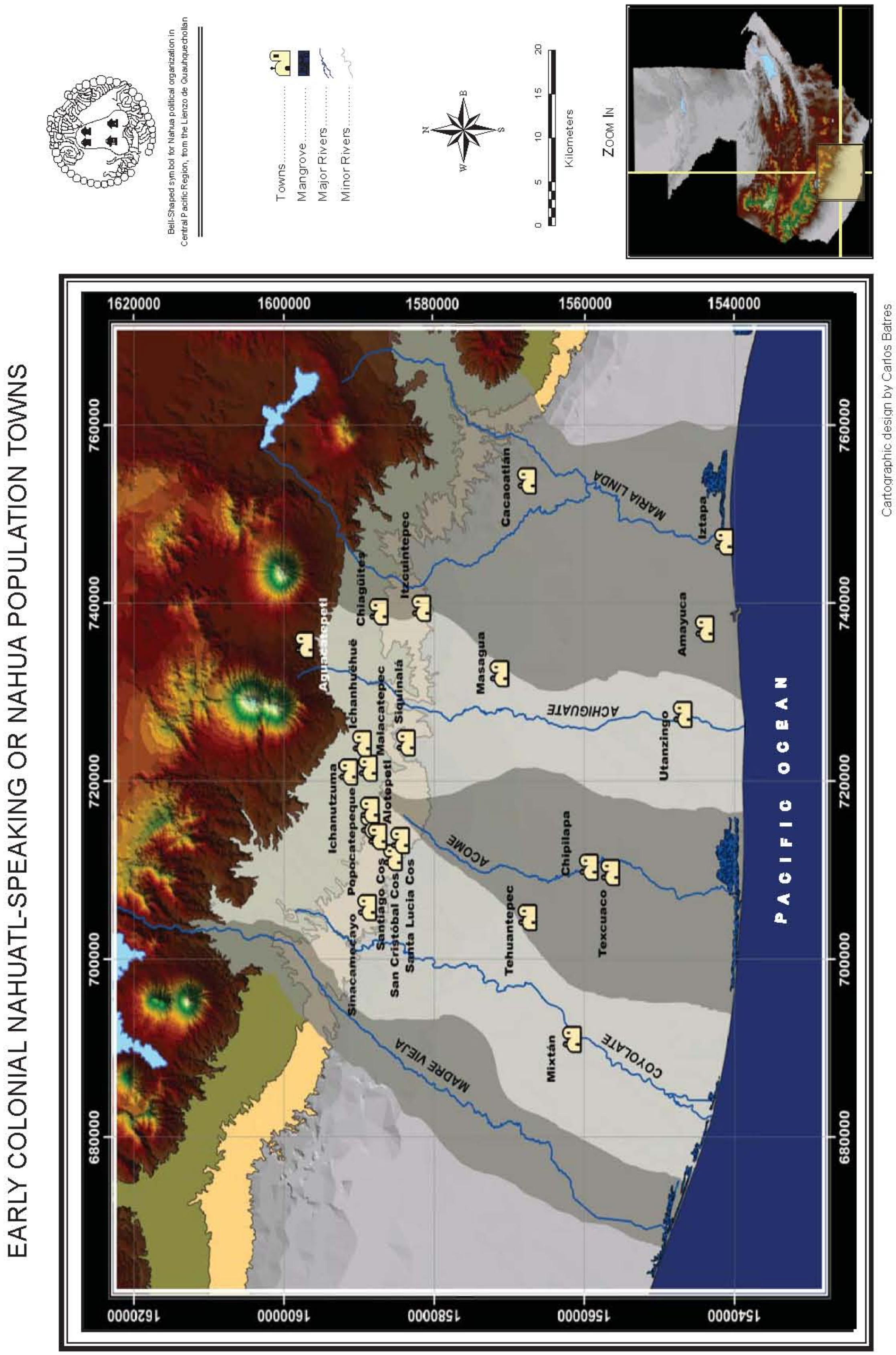

Figure 54: Nahuatl-speaking Towns Record During Early Colonial Period

periods[51], it is possible to identify some correspondence between ethnohistoric documentation, and the archaeological evidence that identifies the Nahua-Pipil.

In the coastal plain zone, the town of Miahuatlán recorded in ethnohistorical documents corresponds to the archaeological site of Costa Rica. Teguantepeque is the earlier name for the area corresponding to the Las Playas- and Nuevo Mundo sites. The towns of Chipilapa and Texcuaco were likely the earlier names for the complex of sites that includes: Gomera, Esperanza, Caulote, Carolina, and Pajuil. Yolanda likely corresponds to the town of Utazingo also known ethnohistorically. In the piedmont zone, Iztcuintepeque was an important site considered to be the capital center of the Nahua-Pipil although it no longer exists. These correlating towns and their locations leave little doubt that the ethical affiliation of their inhabitants was Nahua. The combined archaeological and ethnohistorical data also confirm the geographic extent of the Nahua-Pipil in the central Pacific coast region. How these Nahua towns and their geographic extent correlate with the Nahua social organization (or *altepetl* system) is of greatest concern.

Altepetl Units and Ranking Sites Correlations

The *altepetl* is defined as "a socially stratified state community that occupied a definite, bounded territory with a capital and subject settlements" (Bove, *et*

51 In the central Pacific region, several indigenous coastal towns were affected by Spanish *repartimientos* and *reducciones* processes. Mid-sixteenth century geopolitical and population records concentrate only on the piedmont zone, making it appear more populated than the coastal plain zone. Due to the desirable climate, Spanish settlements were found mainly in the piedmont or *bocacosta* zone contributing to clearer records. Additionally, the Spanish disregarded smaller towns from the coastal plain and omitted them from their reports if they collected no taxation or tribute. Consequently, several piedmont towns were recorded while far fewer towns in the coastal plain zone were reported. Although this was generally the case, archaeologists working in the area have found that the new towns founded by the Spanish reflect at least part of the previous native town distributions and organization (Chinchilla Mazariegos 1996:75).

al. 2004; Licate 1980:36; Lockhart 1992). The *altepetl* structure consisted of several subunits known as *calpulli* (neighborhoods) or clan organizations (Caso 1961; Lockhart 1992; Nutini 1961). The smaller groups of the *altepetl* structure are known as the *chinamitl* (Bove, *et al.* 2004) or *tlaxilacalli*, which are "family group[s] with a fixed territory" (Lockhart 1992:14). The relationship, between ranking sites discussed in Chapter 5 and the Nahua settlement structure can be discussed in terms of *chinamitl*, *calpul*, and *altepetl* levels of organization.

Sites in the investigation were ranked on three hierarchical levels. The lower-levels of the hierarchy were the sites of Esperanza and Nuevo Mundo (rank three) and Caulote, El Jute and Pajuil (rank two). By correlating these sites with the hierarchical structure of the *altepetl* system, these sites correspond to the *chinamitl* or family kinship units. In addition, these groupings of sites are located between 1 and 2 km distant from the other major site (rank one) in the investigation. Combining the *chinamitl* units and the rank one sites (Carolina, Costa Rica, Gomera, Izcuintepeque, Las Playas, and Yolanda sites), the area can be seen to form an extended settlement or *calpul* unit.

Literally, *calpul* means "big house" (Lockhart 1992:16), but in the practical meaning it is a structural unit composed by several families or clans (*chinamitl* units). Each *calpul* is governed by a *calpul* leader or *teuctlahtoani*, who organized and administrated hierarchically the *calpul* and its *chinamitl* units. In sum, a *calpul* is a neighborhood unit with its own leader, name, and ancestral god (Caso 1961; Lockhart 1992:20-23; Nutini 1961).

Due to their geographic location, extent, size, and relationship with the lower ranking sites or *chinamitl*, the Carolina, Costa Rica, Gomera, Izcuintepeque, Las Playas, and Yolanda sites were classified as rank one. In relation to their extent and geographic distribution, the sites or *calpul* units form five nuclei settlements (i.e., Costa Rica, Gomera/Carolina, Izcuintepeque, Las Playas, and Yolanda)

with a territorial domain between the piedmont and coastal plain zones. By correlating these sites with the Nahua settlement structure, the nuclei correspond to the *calpul* units of Lockhart's (1992:20-23) simple *altepetl*[52] which consists of five *calpul* units.

The entire Nahua settlement plan is considered to be an *altepetl*. In practical terms, the *altepetl* is not only a large territorial unit comprised of several *calpul* and *chinamitl* units, but also a cultural concept that encompasses the social, political, religious, and economical bounds of its inhabitants. Ethnohistorical documents, such as the *Título de Ixhuatán and Lienzo de Quauhquechollan,* similarly recorded the social organization of the Nahua-Pipil of the central Pacific coast

The *Título de Ixhuatán* and *Lienzo de Quauhquechollan* were written in two different styles (one using letter characters and the other using iconographic symbols). Both are in agreement when referring to the *altepetl* as the organization system of the costal Nahuatl-speaking towns. For example, the *Título de Ixhuatán* which was written in the Nahuatl language, describes the *altepetl* as the organization and administrative structure to several coastal Nahuatl-speaking towns (Feldman in BoveBove, *et al.* 2004:8-9). The *Lienzo de Quauhquechollan* incorporates the image of a bell-shaped mountain in the region of central Pacific region. The entire bell-shaped mountain symbol, with its four houses is a toponomy symbol used as Nahua population marker, and a symbol used to refer to the Nahua-Pipil *altepetl* (see Asselbergs 2004:164, fig. 74). Based on these indigenous documents, the Nahua costal settlements were administrated by the *altepetl* system.

The entire *altepetl* territory was headed by a major *calpul* administrative settlement. This was the seat from which the *tlatoani* or *altepetl* leader lived

52 Although the *altepetl* can be extremely complex, having several *calpul* units, a simple *altepetl* is frequently comprised four or six (Lockhart 1992:20-23).

and ruled the other *calpul* units and their leaders known as *teuctlahtoani*. Enthohistorical documents and settlement pattern size suggest that the Izquintepeque and Carolina/Gomera sites were likely head *calpul* units in the broader *altepetl* of central Pacific coast region.

In ethnohistorical accounts such as the *Memorial de Sololá o Anales de los Kaqchikeles*, *Lienzo de Tlaxcala*, and the accounts of Pedro de Alvarado, Izcuintepeque is described as the capital city of the Nahua-Pipil. In the *Memorial de Sololá*, the town of Izcuintepeque was referred to as Panatacat. It was known as the capital city of the Kaqchikel Maya enemies with whom they had fought several battles (Recinos and Goetz 1953). When the Spanish conquistadores and their Mexican allies arrived to the Kaqchikel Maya region in 1524, all were to fighting against of the Panatacat or Izcuintepeque inhabitants A scene of this battle is depicted in the *Lienzo de Tlaxcala*. In addition, Pedro de Alvarado wrote how he and his army destroyed the city of Izcuintepeque in his account of the battle (Alvarado 1924:74-76).

Although, the location of Izcuintepeque is unknown archaeologically, both the Spanish and indigenous documents describe it as the capital city of the Nahua-Pipil. In this way, the town of Izquintepeque might be seen at the head *calpul* settlement of the Pacific coast *altepetl*.

Based on archaeological remains described earlier, nucleus three comprises a major settlement complex. It covers an area over four kilometers in length and has two nearby core sites (Gomera and Carolina). A comparison between this settlement area and the other nuclei (i.e., Yolanda, Costa Rica, and Las playas), suggests that the Gomera/Carolina nucleus area was likely another head *calpul* settlement.

With Izcuintepeque and Carolina/Gomera as head *calpul* settlements, the *altepetl* of central Pacific coast had two probable organizations. Firstly, it is

possible that the Carolina, Gomera, Yolanda, Costa Rica, and Las playas sites were headed by the Izcuintepeque *calpul*. In the second framework, it is possible to posit that Gomera/Carolina headed Izcuintepeque, Yolanda, Costa Rica, and Las playas *calpul* settlements. The existence of two head *calpul* settlements in the *atepetl* of central Pacific coast generates some intriguing thoughts.

By observing the chronology, it is possible to find answers that will help to explain the existence of two head *calpul* settlements. Unfortunately, information about Izcuintepeque does not exist in the archaeological record. However, ethnohistorical accounts describe that the Nahua-Pipil people arrived from the Pacific seashore. If this is correct, the Carolina/Gomera nuclear area might have been one of the first settlements of the Nahua-Pipil and also its first head *calpul*.

A second proposal comes from Van Akkeren's (2004b:1056) who argues for the existence of two Nahua-Pipil population areas in central Pacific coast[53]. In this case, the first *altepetl*, headed by Gomera/Carolina, would have been located between the Madre Vieja, Acomé and Achiguate rivers. While the second, likely headed by Izcuintepeque, was to be found between the Achiguate and María Linda rivers.

Although both explanations are likely, more archaeological data are necessary to establish the validity of either proposal. It is difficult to determine whether one or two simple *altepel* units circumscribed the Nahua-Pipil people in central Pacific coast. It is likely that the Carolina, Caulotes, Costa Rica, El Jute, Esperanza, Gomera, Izcuintepeque, Las Playas, Pajuil, and Yolanda sites formed

53 Van Akkeren (2004b:1056) suggests that the first Nahua-Pipil group settled between the Nahualate and Agüero Rivers which correspond to the early colonial tows of Xicalapa, Santa Ana Mixtan, Miahuatlan, Texcuaco, Tecuantepeque and Chipilapa. The second group includes a Nahua-Pipil settlement located betwen the Guacalate and Achiguate rivers and to the south of Izcuintepeque. Izcuintepeque, Masagua, San Juan Mixtan, Izpanguazate, Coyotepeque, Utacingo, Amayuca, and Itzapa are the names of the early colonial towns associated to the second Nahua-Pipil group.

a simple *alteptl* with five *calpul* settlements headed either by Izcuintepeque or by Gomera/Carolina nucleus areas.

In addition, the Nahuatl-speaking towns recorded shortly after the conquest are consistent with the geographic distribution of Nahua-Pipil nuclei discussed in this investigation. Similarly, the raked sites fit into the *altepetl* settlement structure, which has a distinguishable *calpul*, *chinamitl* and head *altepetl calpul* units. In this case, variability among the site plans can be discussed in terms of diverse ethnical expressions, resulting from interactions between the Nahua-Pipil settlers and their neighbors.

Ethnical Diversity and Site Variability

Although the *altepetl* structure is based on strongly Nahua religious, social, linguistics, and class political bounds, it allows ethnical diversity into its settlement structure (Licate 1980:36). Archaeological, linguistic, and ethnohistoric accounts indicated that central Pacific coast region was bordered by diverse by diverse ethnical groups (Chinchilla Mazariegos 1996:75-79; 1998; Fowler 1989a:52-53; Polo Sifontes 1979:38-39; Solano 1974; Thompson 1948:fig 1, pp. 6, 7-16). The northern and eastern sides of the central Pacific coast were occupied by the Tz'utujil Maya people. The western edge was bordered by the Xinca, and the north side was bordered by the Kaqchikel Maya and Cotzulmaguapa inhabitants. The diverse kinds of relationship between those ethnical groups (e.g., socio-political and economic alliances or warfare) would have some impact in the Nahua-Pipil settlement variability.

For example, one interesting alliance which resulted in lineage, economic, political, and territorial agreements occurred between the Nahua-Pipil and the

Tz'utujil[54] Maya. Fuentes y Guzman (Fuentes y Guzmán 1932:Vol. II, bk. 1, ch. 9, pp. 52-58) described how the two allies fought over the extent of their territorial domain in the piedmont and coastal plain zones against the K'iche" and Kaqchikel Maya polities[55]. Van Akkeren (2004b) found that some Tz'utujil Maya lineages living in the highlands were originally from costal Nahua-Pipil towns. For example, members of the Tz'utujil lineage called *Saqb'in* (the weasel lineage) and the *Tz'ikinaja* (the bird lineage) were from a Nahua-Pipil coastal town (Van Akkeren 2004b:1047-48). If this proposal is correct, it is possible to think about this relationship also in terms of Nahua-Pipil lineages. The Las Playas and Nuevo Mundo site plans point to such a coastal presence based on the relationship between the Tz'utujil Maya and Nahua-Pipil.

Clearly, the Las Playas site plan, which includes the nearby site of Nuevo Mundo only 0.5 Km away, is distinctive from all other Nahua-Pipil sites in the study area. The large plaza area at Las Playas is subdivided into three rectangular plazas with an I-shape ballcourt[56] on the south side. This architectonic feature and settlement arrangement is not seen in the other four nucleated areas. Alternatively, they are known to the highland Tz'utujil Maya region (see Chiya' plaza site in Orellana 1984). From this, it is possible to consider that the combined Nuevo Mundo and Las Playas sites were settled by both Nahua-Pipil and Tz'utujil Maya populations.

In others words, at the north-eastern side of the Nahua-Pipil territory Las Playas nucleus might represent a settlement generated by the Nahua-Pipil and

54 The Tzutuhil, according to provincial K'iche' documents (e.g., the Titulo de Totonicapan) were K'iche' vassals for a brief period during the 15th century (Carmack 1979:341; Fox 1981).

55 The K'iche' and Cakchiquel Maya polities were the major protagonists on the Late Post-classic period in the Maya highlands (Fox 1981:321). "From their capitals of Utatlán and Iximche', they formed vast states by subjugating other Mayan ethnic groupings throughout the highlands and along the Pacific coast" (Carmack 1968, 1979).

56 The Salvadorian Cihuatán and Santa María Nahua-Pipil sites also have I-shaped ballcourts (Fowler and Earnest 1985:27).

Tz'utujil Maya interrelationships. A different history is seen along the northern border where Nahau-Pipil and Tz'utujil fought against the Kaqchikel Maya to maintain their territorial domain.

Although the reasons were political and economical, the time during which the Kaqchikel Maya polity extended to the coastal region is unknown. Politically, the Kaqchikel Maya, as did K'iche'" Maya mercenaries, participated in a warfare policy to extend their territorial domain to the coastal region (Borg 1999:663-69). These wars affected the *bocacosta* or piedmont Nahua-Pipil and Tz'utujil Maya inhabitants. Other battles such as those between the Nahu-Pipil from Izcuintepeque and the Kaqchikel Maya from Iximche', or the Sixa battle in which the Nahu-Pipil and the Tz'utujil Maya fought against the Kaqchikel and K'iche' Maya polities are well known in the ethnohistorical documents. Economically, fighting occurred as a part of territorial conquest and also for access and control to several coastal resources.

At the end of fifteenth-century, several Nahua-Pipil areas had been lost and the Kaqchikel Maya polity from Iximche' held the *bocacosta* zone under its control (Johnston 2001:21). In addition, the relationship between Nahua-Pipil and the Cotzumalguapa inhabitants remains unclear although archeological evidences point out that both populations were present in the *bocacosta* zone during Late Postclassic[57]. Due to the ethnical diversity (e.g., Nahua-Pipil, Kaqchikel and Tz'utujil Maya and Cotzumalguapa population) and territorial conflicts, the Nahua-Pipil settlements in the northern region is not clear.

The eastern Nahua-Pipil border was inhabited by the Xinca Population. Archeologically almost nothing is known about the relationship between these groups although the Xinca occupied a extended territory between the

57 Although the Cotzumalguapa zones' ethnic affiliation during the Classic period is unclear, the archaeological evidence indicates a continuing population during the Postclassic period in the area (Chinchilla Mazariegos 1996:347, 546).

Guatemalan (west) and Salvadorian (east) Nahua-Pipil territories (Estrada Belli 1998). Some earlier scholars thought that the Xinca and Nahua-Pipil lived and traded peacefully through their regions (Lehmann 1920:278). This proposal was based on idea that the ethnohistorical accounts do not describe conflicts between them as they did with other groups.

Archaeologically, Yolanda is the Nahua-Pipil nucleus closest to the western Xinca territory. Unfortunately, archaeological studies in this site were not allowed. Based on the Yolanda sketch map alone, the site plan differs significantly from the other Nahua-Pipil sites. The Yolanda site arrangement is considered by Bove (2004:25) to be an example of a Nahua *calpul* on the coast. However, the site's major plaza shows some similarities with the major plaza at Atitipaque, which is an important Xinca site (see Estrada Belli 1998:p. 291, fig. 5.47). If it is possible to argue in favor of these similarities, it might be the case that the Yolanda settlement reflects the relationship between the Nahua-Pipil and Xinca populations. However, this explanation of the Yolanda site plan's variability lacks other clear lines of archaeological evidence. What it is significant, according to ethnohistoric accounts, is that the Yolanda or Utanzingo was an important Nahuatl-speaking town near to the Pacific seashore. It was also likely an important site for the Nahua-Pipil and Xinca inhabitants as well as their social relationship[58].

Bordered by the Tz'utujil Maya (west and northwest side), Kakchikel Maya (in the north) and the Xinca (in the east), the core area of the Nahua-Pipil settlement is found in the central coastal plain zone. In this area, the Carolina/ Gomera complex forms a dense nucleus over four kilometers long. The two major settlements of the complex also show variability in their site plan although they are located nearby (4 Km). For example, the Carolina site is characterized

58 In the area, early colonial records describe that in some towns the inhabitants spoke the Nahuatl and Xinca languages (Solano 1969:184).

by a twin-pyramid[59] complex that is not seeing in the other settlements in the study area. This architectonic feature is thought to be an example of the Nahua political and religious background of the Nahua-Pipil peoples. Bove *et al*. (2004:18) considers Carolina's twin-pyramid reminiscent of the twin temples at the Aztec city of Tenochtitlan. In contrast, the Gomera site forms a large nucleated settlement with a major rectangular plaza found on the north side. Although there is no doubt that the Gomera/Carolina nucleus is the core area for the NahaPipil in the coastal region, the variability can be explained in terms of distinctive Nahua preferences that were united by the *altepetl* or *calpul* origin of the major lineages. From this perspective, the site plan variability in the Gomera/Carolina nucleus might conform to Nahua-Pipil multicultural expression.

In analyzing the Nahua-Pipil settlement and site plan variation, it can be argued that both multiethnic and multicultural factors might account for site plan variability. In this sense, the variation in the site plans of Las Playas and Yolanda might be relate to the multiethnic relationships shared with Tz'utujil Maya and Xinca populations. Those differences observed in the Gomera/Carolina nucleus area might result from the multicultural backgrounds of Nahua-Pipil according to their own expressions. In this way it can be said that the Nahua-Pipil sites did not reflect a unified site plan pattern because they built from the Nahua-Pipil's own ethnical and cultural background as well as the relationships between them and their neighboring Xinca, Kaqchikel and Tz'utujil Maya groups. With this in mind, within the Nahua-Pipil *altepetl* settlement structure, some families (single or extended) might have had a different Nahua cultural background or been from different ethnical groups. The dynamic and degree to which these interethnic interactions through the five nucleated areas were carried out can be discussed

59 Twin temples are common during the Late Postclassic in the Maya highlands (e.g., Cahup, Jilotepeque Viejo, and Los Cimientos-Tulumajillo (Fox 1981:324 fig. 3). The differences between the twin temples at Carolina is their north-south alignment (Bove, *et al*. 2004:18), rather than east-west of those sites.

in terms of the Nahua-Pipil material culture, including: ceramics, obsidian, copper, and the flow of certain crops.

Settlement Nucleus and Economic Functions

When viewed in terms of multiethnic interactions, some local Ixtacapa-complex ceramic groups can be discussed in relation to the Nahua-Pipil, the Kaqchikel and Tz'utujil Maya, the Xinca, and the Cotzumalguapa inhabitants. In the same way, the degree in which these ethnic groups were involved in the ceramic flow throughout the five Nahua-Pipil nucleated areas can be discussed.

In the ceramic thematic maps (Chapter 6), the Santa Rita Micaceous and Masagua Reddish-Brow ceramics show a high tendency to be restricted upper *bocacosta* or Cotzumalguapa zone. Bove *et al*. (2004:13) observes that these two groups have some characteristics (e.g., forms, abundance of mica in the paste, and surface) in common with highland ceramics, particularly the Kaqchikel Maya ceramic groups. Based on geographic location and Bove's observations, the Santa Rita Micaceous and Masagua Reddish-Brown groups are either related to the Cotzumalguapa (*bocacosta* zone) or to the Kaqchikel Maya (highland zone) inhabitants; the Kaqchikel Maya living in or involved in commercial trade between the two areas.

Another ceramic group that shares traits with Maya highland ceramics is Sumatan (Bove 2002:189). In this region, the Sumatan traits also pertain to the Tz'utujil ceramics from the Chuitinamit Chiya' and Chacayá sites (Lothrop 1933:75). It also compares with several highland red micaceous wares (Navarrete 1962; Parsons 1967; Robinson 1994, 1998; Wauchope 1970; Woodbury and Trik 1953). In the coastal plain zone, nearly all Nahua-Pipil sites have Sumatan ceramics, contrasting with the scant proportion observed in the

bocacosta or piedmont zone. Due to this particular allocation to Nahua-Pipil sites and its association with Tz'utujil and Maya highland ceramic wares, it is almost certain that Sumatan is related to the Nahua-Pipil ethnical group as either its producers or as commercial item used by them.

Prado Black, Remanso, Chontel Unslipped, and Pajuil ceramic groups are largely confined to the coastal plain zone. Based on material's source area and paste composition analyzed by INAA, the Prado Black was found to be produced near the site of Carolina (Bove, *et al.* 2004:12). Although the Remanso decorative elements (e.g., zoomorphic effigy head support) belong to a generalized interregional decorative style, this ceramic is locally produced in the coastal plain zone (Vicente Genovez, personal communication 2007). The Chontel Unslipped and Pajuil ceramic groups are found in nearly all coastal plain sites, but their presence in the upper *bocacosta* zone is either negligible or completely absent. Due to the high frequencies and geographic location, their association to Nahua-Pipil inhabitants of the coastal plain zone is without doubt (Bove, *et al.* 2004:12).

Considering this ethnical and geographic framework, it is possible to argue that the ceramic flow in the five nucleated areas (i.e., Costa Rica, Gomera/ Carolina, Izcuintepeque, Las Playas, and Yolanda) was marked by ethnical relationships. By this analogy, throughout the Las Playas nucleus, the Sumatan ceramic group was introduced by the Tz'utujil Maya to the Nahua-Pipil coastal plain sites. The Gomera/Carolina nucleus produced and distributed Prado Black pottery to the other sites in the coastal plain, along with Remanso, Chontel Unslipped, and Pajuil ceramics. In the *bocacosta* zone, the Prado Black and Remanso groups might represent ceramic interchange between the Nahua-Pipil and the Cotzumalguapa inhabitants. The lack of Masagua Reddish-Brown ceramics in the Nahua-Pipil sites, if it was produced by the

Kaqchikel Maya, might be due to the broken commercial relationship between these two antagonist groups, and the constant fighting that ethnohistorical accounts described. As a replacement, the Santa Rita Micaceous ceramic might have been preferred by the Nahua-Pipil because it was a pottery produced by Cotzumalguapa inhabitants.

Based on these correlations, the pottery produced in the highland region (i.e., Sumatan) and *bocacosta* zone (i.e., Santa Rita Micaceous) were introduced to the Nahua-Pipil sites through the Tz'utujil Maya and Cotzumalguapa inhabitants. The coastal plain zone ceramic (i.e., Prado Black and Remanso) went to the Cotzumalguapa and *bocacosta* or piedmont zone through Nahua-Pipil people. The Masagua Reddish-Brown pottery was distributed between Cotzumalguapa and Kaqchikel Maya inhabitants locally in the *bocacosta* zone while the Chontel Unslipped and Pajuil ceramic were distributed by the Nahua-Pipil exclusively through their sites in coastal plain zone.

Interestingly, the ceramic evidence indicates geographic interchanges to the northern and northwestern sides of the territory, but not to the eastern side where Nahua-Pipil and Xinca territories converged. The possibility that this area was also included in the Nahua-Pipil economy can be discussed in terms of the management of local resources, and the extra- and intra-regional interchange items such as foreign ceramics, obsidian, and copper.

Economically, the *altepetl* is a structure based in taxation, land tenure, and resource management (Licate 1980; Lockhart 1992:36). From each *chinamitl* or *tlaxilacalli*, each *calpul* collect the taxes and then transfer them to the major head *calpul* or *altepetl* capital city (Lockhart 1992:14). As economic unit, each *calpul* is a communal settlement that administrates the land and resources around the *chinamiltl* domain. In this sense, all the *chinamitl* are corporate lineages that served the *capul* political and financial functions within the *altepetl* (Carrasco

1999). The five nucleated areas or *calpul* units (i.e., Costa Rica, Gomera/ Carolina, Izcuintepeque, Las Playas, and Yolanda nuclei areas) suggest some economic patterns due to their geographic location and access to resources.

Earlier chroniclers, missionaries, and modern scholars agree that the south Pacific coast region contains some of the best lands for crop production in Guatemala (Orellana 1995; Sifontes 1989:121). Differences in terrain, altitude, topography, soil types, rainfall rates, and vegetation coverage allow several distinct microecological zones to emerge, providing diverse resources such as cacao, maize, salt, cotton, fish, fruits, honey, spices, and medicinal herbs (Bergmann 1969; Feldman 1976; Fuentes y Guzmán 1932:Vol. 2, bk. 2, ch. 2, p. 78; Juarros 1823:24; McBryde 1971:18; Orellana 1995).

Investigating major crops reported by Spanish assessors during the mid-sixteenth century, Orellana (1995) describes products produced and commercialized by early colonial Nahuatl-speaking towns in the central Pacific coast region. Using her description, the five Nahua-Pipil nuclear areas can be associated with some taxpaying product. In the coastal plain zone, the tax crops provided by Costa Rica nucleus (Miahuatlán), for example, were cacao and maize. Cacao was the taxpaying crop for the Las Playas nucleus (Teguantepeque). Carolina/Gomera (Chipilapa and Texcuaco) was paying taxes of cacao, chili, cotton, *indigo*[60], maize, and salt. The Yolanda nucleus (Utazingo) gave cacao and salt as tribute. While in the piedmont zone, the Izquintepeque nucleus was a tax payer of beans, cacao, cotton, fish, fruits, maize, and salt. Interestingly, in these data all nucleated areas have cacao and salt products as common taxpaying items. In the early sixteenth century, most Tzutujil Maya elite

60 Indigo is not a New World plant, the cultivation in Guatemalan central Pacific region has occurred since the mid-sixteenth century when the Spanish introduced it to the region (Solano 1969:98). In 1563 and 1600, the Spanish crown prohibited the use of Indian labor in indigo cultivation because it was harmful to their health and was considered the cause for population decline (Orellana 1995:100).

merchants[61] were petty traders and engaged in trade from the highlands to the coastal lands in order to get salt, cotton, and cacao (Orellana 1984:163). In the same way, the coastal dwellers or Nahua-Pipil elite merchants, went to Tz'utujil Maya towns to get highland products (Orellana 1984:165).

Cacao was a motivation for the Nahua-Pipil settlement in the central Pacific coast, and also generated conflicts and alliances between them and their neighbors. Scholars have proposed that the Nahua-Pipil motivation for migration to the Guatemalan central Pacific was cacao (Dakin and Wichmann 2000; Fowler 1989a). This is supported by the fact that the majority of Nahua settlements in southern Mesoamerica are found in areas that were (and are) extremely fertile for cacao plantations and other products such as indigo and cotton, in addition to the cultural connections with this crop[62].

The Nahu-Pipil also had primary access to the salt producing settlements in central Pacific coast shoreline zone. During the Early Colonial period, for example, the areas immediately to the south of Gomera/Carolina (today known

61 In pre-Hispanic times cacao exchange was largely controlled by merchant elites and community lords. In post-Conquest period, these high status groups lost their monopoly of cacao trade and production because the Spanish gained control of the cacao economy (Orellana 1984:166).

62 Interestingly, the chronicler Fuentes y Guzmán (1932:Vol. II, bk. 2, ch. 5, pp. 90-91) describes that Guatemalan Nahua-Pipil had internal conflicts caused by cacao crops. On the other hand, Oviedo y Valdés describes that the Nahua populations, from Nicaragua had a festival in honor of the cacao harvest. This festival went as follows:

> "*The people in this festival were nude. Their bodies were beautifully decorated with paintings of different colors and the participants used beautiful feathered headdresses. Some of them wore masks emulating different bird gestures and walked around a tall pole in the center of the plaza. At the peak of the pole was a painted idol which the Nicarao said was the god cacaguat or cacao. Two children of six or eight years old were at the top of the pole, one with a bow and arrows in his hands and the other with a small moscador of feathers and a mirror in his hands. These boys spun around the pole until they had descended while the rest of the participants danced around. All the display was choreographed to music and singing on the ground. The festival was complete after ten days when the cacao god was taken to the temple.*" (Oviedo y Valdés 1959:167-168).

as Sipacate[63]) and Yolanda (Utacingo[64]) nucleus are recorded as important salt providers (Andrews 1980:188; Estrada and Niebla 1955; Fuentes y Guzmán 1932:Vol. 2, bk. 2, ch. 10, p. 104; Orellana 1995:98).

Besides to the products described above, the Nahua-Pipil extra-regional economy included imported Maya highland ceramics. Ixtacapa-complex inventory includes Cream Slip imported, Chinautla Polychrome[65], and Fortress Red-on-White[66] ceramics. Cream Slip and Chinautla Polychrome are ceramics from central Maya highland region while, Fortress Red-on-White comes from the coastal piedmont. With the exception of the Yolanda nucleus, all the nucleated areas show considerable proportions of these three imported pottery types. The Izcuintepeque nucleus might have been the area from which Cream Slip and Chinautla Polychrome were introduced to the other coastal plain Nahua-Pipil sites. Due to the relationships between the Nahau-Pipil and the Tz'utujil Maya, the Las Playas and Costa Rica nucleated areas might also have participated in the introduction of Cream Slip to the coastal region. The relationship between the Gomera/Carolina nucleus and the Cotzumalguapa inhabitants might have facilitate the Fortress Red-on-White ceramic flow, as was the case with Santa Rita Micaceous type.

In addition to the extra-regional ceramic interchange, the Nahua-Pipil commercial trade products included eastern highland Ixtepeque obsidian.

63 Andrews (1980:188) describes this area as a important supplier of salt to the central Maya highland region.

64 In the first half of the Sixteenth century, the town of Utancingo, including other small settlements around, was a tax payer of sixteen salt *fanegas* (Orellana 1995:98). A *fanega* is an agricultural unit of capacity around of 55.5 liters.

65 Chinautla Polychrome pottery is a marker for the Postclassic period in the highlands of Guatemala although the original technology dates to the Classic period (Rice 1977; Wetherington 1978). Through southern Mesoamerican Pacific coast, Chinautla Polychrome is found in the western Pacific coast (Coe 1961), the Xinca region in the east (Earle n.d.), and in western region of El Salvador (Sharer 1978).

66 Fortress White-on-Red is an imported ceramic variety from the coastal piedmont zone and highland region (Bove, *et al*. 2004).

Although Ixtepeque obsidian was used by coastal inhabitants from the Classic periods, it was during the Late Postclassic period when a dramatic increase of artifacts and materials from this source occurred. Bove *et al*. (2004:15) reports that the 91% of obsidian at Nahua-Pipil sites comes from Ixtepeque source.

This dramatic change suggests not only the preference for the Ixtepeque obsidian type, but also that access to the northern highland obsidian source of Martín Jilotepeque was cut off. The fights between the Nahua-Pipil and the Kaqchikel Maya may have resulted in the lack of the Jilotepeque obsidian. Also of interest is the lower frequency of Chayal obsidian in the Nahua-Pipil sites at this time. A possible explanation for this might be due to the Nahua-Pipil settlements controlling Ixtepeque source. Fowler (1989a) proposes that during the Late Postclassic period, the Ixtepeque obsidian source was controlled by Nahua-Pipil from Asunción Mita which was under the Cihuatan administration; in El Salvador this was the major Nahua-Pipil political center (Fowler and Earnest 1985:25). The increase in the Ixtepeque obsidian flow might have been facilitated through Izcuintepeque or Yolanda nuclear areas. For this reason, the relationships with the Xinca inhabitants would have been crucial for making the supply of this product possible.

Items such as Mexican green obsidian and copper were also a part of long distance Nahua-Pipil commercial trade. The exotic green obsidian from Pachuca Hidalgo, Mexico sum a total of 14 specimens in all Nahua-Pipil sites, 78.6% (n=11) of which comes from the Carolina site (Bove, *et al.* 2004:19) or Gomera/ Carolina nucleus. In addition, artifacts and copper materials were also identified

at this nucleated area[67]. The copper sample contains both ornamental and utilitarian artifacts[68] which come from domestic residential and elite contexts.

In Guatemala, Chiquimula, Zacapa, and Huehuetenango are three areas with copper sources (Mencos and Moraga 2005:978). However, the Nahua-Pipil copper is considered to be imported from the center or western Mexico regions, meaning that long-distance network interchanges and commercial trade took place (Mencos and Moraga 2005:980). Because the Gomera/Carolina nucleus shows a high quantity of copper and green obsidian, it was likely the nucleus for centralizing and distributing these long distant exotic items.

Throughout the five nuclear areas, there is a pattern for economic specialization and multiethnic relationships. In the Costa Rica nucleus (Miahuatlán) there was cacao and maize. In conjunction with Las Playas (Teguantepeque) which also produce cacao, the two likely participated in the introduction of Sumatan Cream Slip pottery to the coastal plain zone from the highland or *bocacosta* regions. The Gomera/Carolina nucleus (Chipilapa and Texcuaco) produced and distributed the Prado Black, Remanso, and Chontel Unslipped pottery and was engaged in copper and green obsidian distribution. Cacao, chili, cotton, indigo, maize, and salt were the crops produce by this nucleus. Izquintepeque produced beans, cacao, cotton, fish, fruits, maize, and salt. It also introduced the Cream Slip and Chinautla Polychrome pottery and Ixtepeque obsidian from the highland region to the coastal plain zone. Ixtepeque obsidian was also introduced by the Yolanda nucleus which produced cacao and salt.

Different economic exchanges marked the interaction between the Nahua-

67 A total of 27 copper artifacts were recovered from all operations of the Nahua-Pipil Project, and 88.9 percent (n=24) of these artifacts were excavated at the Carolina site (Bove, *et al.* 2004:19; Mencos and Moraga 2005).

68 The copper artifacts found in the Nahua-Pipil sites included: sewing needles, fish hooks, rings, strips, and several copper alloy nuggets (Bove, *et al.* 2004:19).

Pipil and the Kaqchikel Maya, Tz'utujil Maya, Xinca and Cotzumalguapa inhabitants. Items such as Prado Black, Fortress Red-on-White, Santa Rita Micaceous, and Cream Slip pottery evidenced the economic interactions between Gomera/Carolina (coastal plain zone) and the Cotzumalguapa (*bocacosta* zone) inhabitants. The hostile relationship between the Nahua-Pipil and Kaqchikel Maya population is indicated by the lack of Masagua Reddish-Brown pottery and changes in obsidian preferences. The interaction between the Tz'utujil Maya and Nahua-Pipil is more than evident in settlement spaces that were shared, and the interchange of Sumatan, Prado Black, Remanso, Chontel Unslipped pottery. Finally, the Ixtepeque obsidian movement trough the Yolanda and Izcuitepeque nuclear areas might mark the relationships between the Nahua-Pipil and Xinca inhabitants.

In this economic and ethnical interaction framework, there is no doubt that the five Nahua-Pipil nucleated areas (i.e., Costa Rica, Gomera/Carolina, Izcuintepeque, Las Playas, and Yolanda) had a particular economical function as did the *calpul* units. Therefore, the five nuclei formed by the Nahua-Pipil settlements can be seen as settlement nodes or *calpul* units that administrated economic resources and the flow of goods through the entire Nahua-Pipil *altepetl* in central Pacific coast.

Summary

The ethnohistorical accounts and archaeological evidences indicate that the Nahua-Pipil arrived to the central Pacific coast region during the Late Postclassic period. In this region, the Nahua-Pipil settlements were organized according their ethnical sociopolitical structure knows as *altepetl*. Their settlement distribution throughout the central Pacific coast region provided the Nahua-

Pipil people with access to a significant variety of resources that suggests not only economic motivations for their settlement, but also a commercial network that was based on resource management, inter-ethnic relationships, and local and extra-regional commercial trade. The location of Nahua-Pipil settlements, their access to resources, and their management of products were critical for generating alliances and for creating conflict. While the Nahua-Pipil and Kaqchikel Maya had a relationship of conflict, the Nahua-Pipil had friendly ties with the Tz'utujil Maya. This close relationship was marked by diverse alliances such as marriage, settlement sharing, and commercial interchanges. Although, the relationship with the Xinca is still not clear, it was apparently friendly. In sum, there is no doubt that the Nahua-Pipil settlements were an important and strong *altepetl* polity in central Pacific coast region during the Late Postclassic period.

Conclusion Remarks

This thesis presented issues and important advances regarding the investigation of the Guatemalan Nahua-Pipil. Throughout this work the goal has been to give form to the Nahua-Pipil archaeological corpus which had been affected by the paucity of direct Postclassic archaeological investigation in central Pacific region. As part of Bove and Genoves' project, the main contribution of this thesis was to summarize the data in this corpus providing a description and discussion about the Nahua-Pipil settlement characteristics and their relation to the *altepetl*. Whether this structure was embodied by the Guatemalan central Pacific coast Nahua-Pipil sites was the primary question guiding this work. Based on the evidence presented in previous chapters, there is a little doubt that the Nahua-Pipil settlements were organized and functioned under this system. This system also reflects their Nahua ethnical and sociopolitical background.

Departing from the theoretical conceptualization of space as a matrix where human experiences are practiced, recorded, categorized (Bourdieu 1977), enacted (Merleau-Ponty 1962), and reconstructed (Bell 1992; Bourdieu 1977), it is possible to say that the Nahua-Pipil construction of space is evident on three levels: a) space as memory for the preservation of family or kingship bonds, b) space as an economic communal concern, and c) space as ethnical boundary to control and administer large territorial domains. In relation to these three levels, the Nahua-Pipil space was not homogenous because the construction of Nahua-Pipil *chinamitl* and *calpul* spaces was a reciprocal relationship between landscape, identity, ethnicity, and cooperative group motives. It allowed for the integration of some neighboring groups and the rejection of others through communal agreements or polices throughout the entire *alteptl*. For this reason, when the Nahua-Pipil space is interpreted as cultural settlement text, the text does not reveal a rigid spatial history. In contrast, it describes a cultural history in which the Nahua-Pipil spatial arrangement, management, and administration was also negotiated in order to reach communal goals.

Although it is not possible to say precisely which factors caused the Nahua-Pipil migration to the central Pacific coast region, there exist several proposals that are persuasive (e.g., ethnic conflicts, climatic disasters, commercial and political reasons), places of origin (e.g., Central Mexico, Gulf Coast, Tehuantepec, and Soconusco), and dates (e.g., from A.D. 300 to 1500) for the Nahua migration in southern Mesoamerica. However, there is a lack of solid evidence to fully accept proposals about their long migratory travel, particularly from Central Mexico, the Gulf coast, or the Isthmus of Tehuantepec. In contrast, the Soconusco region, also well known for being inhabited by Nahuatl-speakers during Postclassic period, is the most probable area from which Nahua-Pipil peoples migrated to the Guatemalan central Pacific coast. In agreement

with Bove *et al.* (2004), the most likely proposal is that this movement from Soconusco was massive and fast Late Postclassic intrusion to the central Pacific region.

Throughout the Nahua-Pipil settlement and ceramic analysis, GIS was a useful tool permitting elaborated thematic maps that: show the Nahua-Pipil archaeological remains contextually, illustrate the form in which their settlements were structured, and show the ways in which some economic items moved through this geography. In this sense, the thematic maps produced by GIS, and other software described in appendix A, were a holistic analytic instrument with which to view the Nahau-Pipil settlement plan and ceramic. It was also useful for joining cultural nodes together to reflect the ethnical background of this group, and their particular adaptation to the central Pacific coast geographic zones. In this way, GIS placed the Nahua-Pipil archaeological remains within a social-geographic- framework that displayed their economic and ethnic settlement structure.

As a final point, it is true that the intention in the present thesis was to find an answer to the question whether or not the *altepetl* was the Nahua-Pipil socio-political structure. It is important to clarify that the answer was not the most important objective. In contrast, this question was tool by which to shape the investigation, as it will be in future investigators and for those interested in the topic. In this regard and paraphrasing Michael Coe, questioning the “enigmatic” Nahua-Pipil will always be the tool to remove the halo of obscurity that surrounds this group. In this way, a better understanding of their social history viewed through their archaeological remains and their participation in the construction Guatemalan history will be gained, although their presence in this modern territory is considered extinct.

Recommendations

In the aftermath of the civil war, Guatemala was recognized as multi-ethnic, multi-lingual, and multi-cultural nation where the predominant ethnic groups were Maya, Xinca, Garifuna, and Ladinos. In the central Pacific coast, ethnohistoric accounts, linguistic evidence, and archaeological data show that a cultural group named Pipil was also there. As archaeologists who construct history through the artifacts, it is our responsibility not to forget this part of the Guatemalan archaeological history. Although the Nahua-Pipil descendants are no longer in the area which presents a challenge for archaeological studies, it is necessary to encourage more investigations that will characterize their archaeological assemblage.

From this perspective, investigations should be focused on developing and testing methods for extracting ethnical markers from the archaeological remains of the area. Implementing and generating investigations like this and those of Bove and Genovez in the case of Guatemalan Nahua-Pipil archaeology, it will be possible to move deeper toward understanding this cultural group and its relationship Maya and Xinca groups. In this way, the halo of the difficultly that surrounds our understanding of the enigmatic Nahua-Pipil will begin to be dismissed in Southern Mesoamerican archaeology.

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APPENDICIES

APPENDIX A.
SOFTWARE

The software packages used for creating thematic maps included mapping, drawing and spatial analysis programs such as ESRI® ArcGIS 9.2, Autodesk Map® 3D 2007, Surfer® 8, and AutoCAD®. Data storage, processing, and statistic programs such as Microsoft® Office Access 2003 database program were used for data storage while the Excel® spreadsheet program was used for data processing and descriptive statistical analysis. The Adobe Creative Suite® which includes Adobe® Photoshop® CS raster graphics program, Adobe® Illustrator® CS digital graphic design software, and the Adobe® InDesign® desktop publishing program were also used in the final thematic map creation and data presentation.

Because maintaining spatial relationships between artifacts and their contexts are critical in archaeological investigations, ArcGIS 9.2 software was chosen for this procedure. This software is the standard and most powerful tool for spatial analysis and allows storage of great volumes of data that are easy to retrieve, manipulate, and visualize spatially (Green 1990:3; Marble 1990:9; Renfrew and Bahn 2000:87-89; Savage 1990:22). It is also useful for manipulating and managing both vectorized and rasterized forms of data (Burrough and McDonnell 1998:11; Maca 2002:72). Many variables can be measured and recorded simultaneously according to their geographic position and spatial context (Renfrew and Bahn 2000:87; Thomas 2005:33).

A number of software varieties are available to produce Isarithmic line maps (contour line maps), including ArcMap from the ArcGIS package. However, Surfer 8 was used to generate the contour maps in this analysis because it is faster and more efficient for the task, not only in the field, but also when creating the first impressions of the maps themselves. Additionally, it facilitates the

exportation of contour polylines in ESRI Shapefile (*.shp) format for working in the ArcGIS package, as well as AutoCAD DXF (*.dxf) format for use with Computer-aided design (CAD) programs such as Autodesk Map® 3D and AutoCAD.

The limitation of Surfer 8 and the file formats already mentioned is that many features drawn by this program, such as dots, polylines, and polygons are exported without their dimensional information (e.g., X, Y, and Z coordinates). Autodesk Map® 3D permitted the interchange of information between ArcGIS, Surfer 8 and Autodesk Map 3D without losing any spatial information related to the digital features. Autodesk Map 3D has the advantage of being designed to draw complicated features that can be incorporated into contour or topographic maps. In the present work, Surfer 8 and Autodesk Map 3D were used together because the process of data preparation was made more efficient (e.g. user-friendly and less tedious) than using ArcGIS alone.

The Adobe® Creative Suite® package was used because the presentation of the archaeological data and cartographic design required high quality graphics integration. Photoshop® was used because of its capacity to sharpen and intensify image quality, combine multiple images, and to manipulate images generated in the software previously mentioned. Adobe Illustrator® was then used to correct and enhance vectorized graphics and InDesign® established templates for the reproduction of the final maps which combined base maps, charts, symbols, verbal content, and other thematic map information which had been created using the other programs. These software packages were run in AMD Athlon™ 64 Processor 3800+ 2.4 GHz personal desktop computer with two gigabytes of RAM memory.

APPENDIX B.

FRANCISCO DE BOBADILLA ACCOUNTS' QUOTE

"… No somos naturales de aquesta tierra, é há mucho tiempo que nuestros predeçessores vienieron á élla, é no se nos acuerda que tanto há, porque no fué en nuestro tiempo.

… La tierra, de donde vinieron nuestros progenitores, se diçe Ticomega é Maguateca, y es hacia donde se pone el sol: é viniéronse porque en aquella tierra tenían amos, á quien servian, é los tractaban mal." (Francisco de Bobadilla in Oviedo y Valdés 1945:Vol. XI, bk. 4, ch. 2, pp. 82).

APPENDIX C.
FRAY JUAN DE TORQUEMADA ACCOUNTS' QUOTE

[1] *"… Según se platica, entre los Naturales de esta Tierra, maiormente los Viejos, dicen, que los Indios de Nicaragua, y los de Nicoya (que por otro Nombre se dicen Mangnes) antiguamente tuvieron su Habitacion en el Despoblado de Xoconochco [Soconusco]; que es en la Gobernación de Mexico. Los de Nicoya Deciendén de los Chololteca. Moraron ácia la Sierra, la Tierra adentro; y los Nicaragua, que son de la Anahuac, Mexicanos, habitaban ácia la Costa del Mar del Sur. La vna, y la otra era mui gran multitud de Gente; dicen que avrá siete, u ocho edades, o vidas de Viejo, y estos que vivian larga vida, hasta venir á ser mui ancianos, que vivian tanto, que de viejos los sacaban al sol.*

En aquel tiempo vino sobre ellos, vn grande Exercito de gente, que se decían, Olmecas. Estos dicen, que vinieron de ácia Mexico, y que antiguamente avian sido Capitales enemigos de aquellos, que estaban poblados, en el Despoblado, que aora es entre el Xoconchco, y Tequantepec. Estos Olmecas, dieron Guerra, vencieron, y sujetaron a los Naturales, y pusieronles grandes Tributos, …

… Viendose en tanta aflicion, y en tan grave servidumbre, los que antes estaban Señores de aquella Tierra, y la poseían pacíficamente, demandaron Consejo a sus Alfaquies, que les dixesen, qué debian hacer, que yá no podían sufrir tan Tiranos Tributos, y tantos Trabajos, y Muertes. Entonces los Alfiquies … dixeron: Que se apercibiesen para que todos en vn dia, lo mas secreto, que pudiesen, levantasen sus

1 These and following paragraphs in this appendix are direct quotations archaic spellings and orthography is maintained in the quotations.

mugeres y Niños, y sus Haciendas, y se fuesen adelante, y dexasen aquella Tierra [Soconusco] …

… Pasaron por la Tierra de Quauhtemallan [Guatemala], y anduvieron cerca de cien Leguas adelante. Allegaron á vna Provincia, que los Españoles llaman Choluteca, ó Choroteca …

… Esta Generacion vino por la Costa del Mar del Sur, y pasaron por Tierra de Quauhtemallan, entre los Naturales de aquella Tierra. Estos donde veian algún buen Asiento, para poblar, poblaban; y de esta Generacion, son los que en la Nacion de Quauhtemallan, llaman Pipiles, como son los Pueblos , que llaman los Eçalcos … El pueblo de Mictla, y el de Yzcuintlan [Izcuintepec] *…"* (Torquemada 1943:Vol. I, bk. 3, ch. 40, pp. 331-333).

APPENDIX D.
FERNANDO DE ALVA CORTÉS IXTLILXOCHITL ACCOUNTS' QUOTE

"…. *En el año de 1523, teniendo noticia Ixtlilxuchitl y Cuauhtemoctzin, que los de Cuauhtemalan, Otlatla, Chiapan, Xoconusco y otras provincias de la Costa Sur, sujetas á las tres cabeceras, estaban rebeladas … dieron aviso á [Hernando] Cortés, el cual tenía presupuesto enviar ciertos españoles para que reconociesen la tierra; y visto que era menester sujetar primero á estos lugares, dijo á los señores [Ixtlilxuchitl y Cuauhtemoctzin] que mandasen á sus vasallos le diesen socorro para que fuesen con [Pedro de] Alvarado á sujetarlos. Cuauhtemoc y Ixtlilxuchitl, que ya tenían apercibidos á sus vasallos, juntaron veinte mil hombres de guerra, y muy expertos en la malicia y tierras de la Costa, enviando cada uno de ellos su general con diez mil hombres de guerra, los cuales fueron con Alvarado, y llevaban más de trescientos españoles. Salieron de México á 6 de Diciembre: fueron por Tecuantepec á Xoconusco, y de camino castigaron muchos lugares que estaban rebelados, especialmente á Tzapotlan, … Quezaltenago … Otatlan … Después de haber sujetado á Otatlan y Quezaltenago, …* [Pedro de] *Alvarado y los demás se tornaron á Cuauhtemalan, en donde vinieron muchos pueblos que estaban sustraídos y rebeldes á darse en paz, y otros de la Costa del Sur. Todos los de la provincia de Ixquintepec estaban muy rebeldes, y hacían mal á los que venían á ver a los cristianos; …*" (Ixtlilxochitl 1891:Vol. I, Relación 13, pp. 391-94).

APPENDIX E.

FERNANDO DE ALVA CORTÉS IXTLILXOCHITL ACCOUNTS' QUOTED

"… *y los pocos Tultecas que habían escapado de su destrucción, los dejó vivir en los puestos y lugares en donde estaban reformados y poblados cada uno con sus familia, que fue en Chapoltepec, Colhuacan, Tlatzalantepexoxoma, Totolapan, Quauhquecholan, y hasta las costa del mar del Norte en Tozapan, Tochpan, Tziuhcoac y Xicotepec, y lo mismo en Chololan, aunque algunos de ellos no pasaron sino hasta la tierra de Nicaragua á donde fueron á poblar, y á otras tierras remotas, en donde no llegó con tan fuerza la seca y la calamidad referida* …" (Ixtlilxochitl 1891:Vol. I, ch. 4, pp. 36-37).

APPENDIX F.

FRANCISCO A. DE FUENTES Y GUZMÁN ACCOUNTS' QUOTED

"*… en toda aquella costa se halló otra señal más de la de los Pipiles, que como mercaderes y tratantes se habían introducido en la tierra* [Guatemala], *…*

… Ahuizol [*Ahuitzotl*], *… quiso introducir en estas provincias de Goathemala* [Guatemala], *por las playas y riberas del sur, alguna de su gente, que fueron como llevo dicho, los que pasaron con título de mercaderes y oficiales; malográndose y quedando pausada esta máxima, á poco tiempo de empezarse á introducir, y frustrándose la astucia con su muerte este mismo año, que fue el decimo segundo de su reinado …*" (Fuentes y Guzmán 1932:Vol. I, bk. 2, ch. 2, pp. 46-48).

APPENDIX G.
ANONYMOUS ACCOUNTS QUOTE

"Que valiera más que [una conquista] nunca se hiciera, sino conforme a justicia, que fué mal hecho, y no conforme á lo que sus Majestad mandó, &c. [fin de la cita]. Refiero esto para que se vea que entre los conquistadores hubo varios pareceres acerca de lo justo ó injusto de estas acciones de guerra, y no aprobaban todos lo que hacían uno…" (Anonymous 1935:203).

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