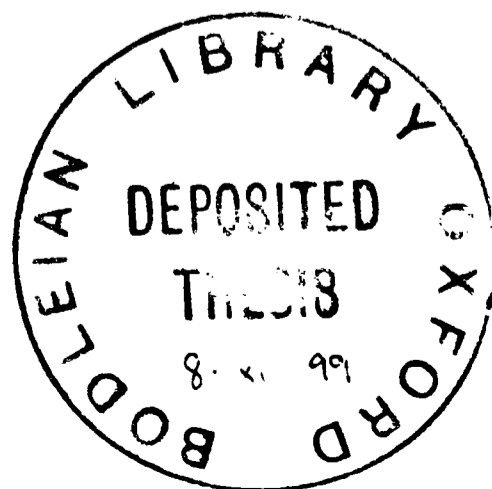


THE WORLD OF THE CALUSA

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A dissertation submitted in partial fulfillment of the requirements for the degree of Doctor of Philosophy at the University of Oxford

Trinity Term, 1999
St. Cross College



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To J. Raymond Williams
1936 - 1995

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The study included herein represents my own interpretations, opinions and speculations unless otherwise stated. Responsibility for accuracy lies wholly with the author.

ABSTRACT PER GENERAL BOARD REGULATIONS

The World of the Calusa
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The purpose of this study is to investigate the factors which played a role in the isolation of the Calusa Indians of the Southwest Florida Gulf Coast after initial Contact with Europeans. Isolation is viewed as the key which allowed the Calusa culture to survive for nearly two centuries following Contact.

The Calusa chiefdom which had its beginnings in early prehistory, controlled all of the South Florida coast and jeopardized Spanish shipping in the West Indies due to the numerous shipwrecks on Florida shores. The Spanish sought to establish peace with the Calusa and their neighbours, but their efforts were useless.

The Spanish abandoned the Southwest Florida coast and moved to North Florida where Indians who relied on agriculture could provide supplies for Spanish colonial settlements. Meanwhile, a deep period of isolation of the Calusa from the Spanish began. This isolation was supported by several factors, including: the geography of South Florida, the hostility of the Calusa and the effectiveness of native warfare technology, Spanish administrative policy in the New World, the lack of precious metals or other resources important to the Spanish, and the lack of Spanish support to colonial settlements in Florida. This isolation protected the Calusa from extended exposure to European diseases and the militarism associated with Spanish culture. But this only delayed their demise as diseases and warfare led to their extinction by the mid-18th century.

ABSTRACT PER ANTHROPOLOGY FACULTY BOARD REGULATIONS

**The World of the Calusa
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Trinity Term, 1999**

In this study, I explore the factors of isolation which may have played a role through their cumulative affect in Calusa survival. A once powerful Calusa nation remained intact for nearly two hundred years after Spanish Contact. Using ethnohistoric archaeological methods, I have investigated questions of Calusa survival.

The geography of South Florida, the hostility of the Calusa and the effectiveness of native warfare technology, Spanish administrative policy in the New World, the lack of precious metals or other resources important to the Spanish, and the lack of Spanish support of settlements in La Florida all probably played a role in the survival of the Calusa for such a long period after Spanish contact. Ultimately, though, the Calusa culture appears to have died as the other native cultures of Florida -- as a result of European diseases and their displacement by Lower Creeks streaming in from north of Florida. No one factor seems to have caused the isolation of the Calusa from the Spanish.

Early in prehistory, the development of cultural complexity appears to have begun in Southwest Florida. Through time, this cultural complexity continued and flourished. In the mid-16th century, the Spanish found the Calusa living along the Southwest Florida coast and described them as a complex, hierarchical society based on a fishing-hunting-gathering economy. The Calusa chief held a powerful position. Commoners, skilled artisans, warriors, nobles, chiefs, and probably traders as well all lived together in the Calusa society.

The rich material culture of the Calusa is reflected in the artifacts recovered from Southwest Florida archaeological sites. Theirs was a rich culture with powerful images.

Spanish documents portray a militarily influential Calusa culture which controlled all of southern peninsular Florida, including that area south of a line extending roughly from Sarasota on the west coast to Cape Canaveral on the east coast. The communities found therein were vassals of the Calusa and were required to pay tribute to the Calusa chief.

Explorations of La Florida began in earnest in 1565. The loss of treasure ships was problematic along the South Florida coast due to poor piloting, a lack of knowledge of the coastline, piracy (French, English, and Dutch), poorly designed boats, and storms. But other problems were lurking in La Florida — in particular, a settlement of heretical French Lutherans. Various European countries sought to establish footholds within the New World to challenge Spain's stranglehold on New World wealth.

During these early years of Spanish presence in the New World, the Spanish Crown supported the enslavement of New World natives under certain conditions. This decision was a result of economics. Despite infusions of New World wealth, the Spanish treasury at this time was in crisis, marking the most stupendous economic blundering ever recorded. Therefore, Menéndez acted through private enterprise to: 1) remove French settlers ("heretics"); 2) fight piracy in the West Indies; 3) map the Florida coast; 4) settle La Florida to set in motion a program to spread Catholicism; and on a personal note, to search for his son who had been shipwrecked on Florida shores.

Menéndez reached the east coast of Florida in 1565 where he successfully routed the French settlement at Fort Caroline. Next, he established St. Augustine and began to explore the St. Johns River. Menéndez hoped to find a cross-peninsular river route which would provide a safer alternative to the treacherous South Florida coast.

This brought Menéndez to the Southwest Florida coast and the Calusa. He hoped to find the western outlet of a cross-peninsular river route that linked to the St. Johns River on the east coast. But he also sought his son and other shipwrecked Spaniards. The safety of Spaniards moving along the South Florida coast required a peace with the Calusa which was more precious than silver, gold, or pearls.

Menéndez arrived on the Southwest Florida coast in 1566, but instead of finding peace, found a bellicose Calusa chief known to the Spanish as “Carlos.” Not only was Carlos ever-plotting to kill the Spaniards, but there also seemed no way to establish a lasting peace with the Calusa. Menéndez never located a cross-peninsular river route despite his extended efforts. Soon Menéndez’s sailors had bartered for most of the gold and silver that the Calusa seemed to have and the Spanish learned that there were no nearby sources of these precious metals.

Even though he was no doubt discouraged, Menéndez established a mission and garrison at the Calusa capital -- believed to have been Mound Key. Through religious conversion, the Spanish believed that the native Floridians would eventually be under Spanish control with a minimum of costs. But the Spanish efforts gained them nothing in Southwest Florida.

Menéndez made one final effort to gain control of South Florida by petitioning the King of Spain in 1573 for the enslavement of the South Florida Indians due to their hostilities towards the Spanish. But his petition came too late. The Spanish Crown had already enacted a prohibition of the enslavement of New World natives based on information provided by Bartolomé de las Casas and others who reported the atrocities of the Spanish towards the natives. The effort to enslave the South Florida Indians came to a dead halt.

Spanish attention was soon drawn elsewhere. Despite the intense contact at this early stage, the Spanish abandoned the Southwest Florida coast. A deep period of isolation from the Spanish begins for the Calusa. Isolation is an important issue because distance from the Spanish may have provided some protection from exposure to deadly European diseases and certainly from the militarism of the Spanish. Several factors seem to have worked to maintain this isolation, including: the open hostility of the Calusa and the effectiveness of native military technology, the uninviting South Florida environment which made Spanish movements difficult, the lack of resources precious to the Spanish, and the lack of Spanish support for colonial settlements in Florida. Separately, these factors may not have resulted in such a degree of Calusa isolation from the Spanish, but the cumulative affect was successful.

The Spanish threat may also have served to solidify Calusa allegiances in South Florida. During his earliest visits to Southwest Florida, Menéndez feared a collusion between the Tocobaga and the Calusa who were bitter enemies. His fears were probably well-founded.

During the late-17th century, the loss of native Floridians in North Florida led to renewed

interest by the Spanish in South Florida natives. Unofficial trade between the Spanish and South Florida Indians is revealed in a 1617 letter of complaint from Franciscans in St. Augustine to the king. They charged the Spanish administration for a continued trade of amber with the South Florida Indians which thwarted their plans to establish missions in South Florida. This issue of trade has not been fully researched, but it does suggest an equal standing between the parties involved.

Eight decades after the letter of complaint and nearly 150 years following the first mission attempt amongst the Calusa, a second mission was established in 1697. Missionaries to this mission reported a thriving, powerful culture that continued to lack interest in Christianity had greater disdain than ever for the Spanish. The Calusa sent the missionaries packing. After only three months, the missionaries were left with only their undershirts and stranded in the Florida Keys by the unwelcoming Calusa.

In 1743, the Spanish discovered a reduced Calusa population in South Florida who appear to have suffered from the incursions of Creeks who pushed into Florida, displacing the native Florida cultures. European diseases also seem finally to have caught up to this unique culture. By the mid-18th century, the Calusa were virtually extinct.

INTRODUCTION

During the early 16th century, Spanish explorers encountered the powerful and socially stratified Calusa Indians along the southwest coast of Florida. Although other native Florida cultures were receptive to Spanish inroads or susceptible to Spanish administrative decisions, the Calusa successfully maintained their distinct culture for nearly two centuries following Spanish contact. This retention of Calusa cultural identity is examined herein, with an emphasis on the concept of isolation. Despite strong Calusa cultural identity which existed through the early 18th century, European diseases which decimated Florida native populations were probably partly responsible for the extinction of the Calusa along with the loss of native territory to Lower Creeks streaming in from the north. By the end of the 18th century, there were no known native groups identified as Calusa in Florida.

Unlike tribes in North Florida and elsewhere in the Southeastern U.S., the Calusa Indians did not rely on agriculture as their subsistence base. Instead, the rich estuarine environment of the Gulf coast waters appears to have served as a reliable and plentiful source of food. Without the assumed benefits of an agricultural subsistence base, the Calusa were still able to develop a powerful and complex hierarchical society. Details of the development of this complexity are still debated. Central to the theme of this work is the concept that the Calusa chiefdom described by the Spanish was not solely a product of European Contact and instead, had clear roots established in prehistory.

To date, archaeological deposits representing the Calusa culture have been found primarily in the Charlotte Harbour/Pine Island Sound area (see Figure 1). There are several combined



Figure 1. Calusa Culture Area (from Marquardt 1992a)

environmental factors which result in an extremely rich and productive estuarine area in Southwest Florida. Perhaps most importantly, the shallow and protected bays and embayments along the southwest Florida coast serve as fish nurseries as well as permanent habitat to a variety of fish and shellfish. The discharge of freshwater from rivers and creeks into the gulf also plays a critical role in the support of estuarine resources. The sub-tropical environment permits the growth of tropical plants and trees where frosts are rare. As testament to the prehistoric abundance of estuarine resources that must have provided abundance are reports of large numbers of fish present in the area just a few decades ago.

There are numerous waterways in South Florida which served ably as an aboriginal transportation network. The Gulf of Mexico, bays, rivers, creeks, swamps, and sloughs all provided avenues for aboriginal travel. The abundance of waterways would have allowed easy access to the Gulf shorelands, the interior of Florida, and the opposite shore of peninsular Florida. Because the Calusa culture was a water-oriented culture, their movements probably also included the successful negotiation of large bodies of water. The Spanish, on the other hand, were to find this myriad of waterways useless for navigation with the unwieldy Spanish watercraft.

Huge shell mounds and middens along the Southwest Florida coast are the most easily recognized type of Calusa archaeological site. They reflect the importance of shellfish in the Calusa diet, but also serve to mask the greater importance of fish which dominated the Calusa caloric intake. Complementing this marine-based diet is documentary evidence of tributary foods from interior vassal settlements. To the Spanish, these native foods were

foreign and their ties to Spanish dietary habits were difficult to overcome in the New World.

The fortuitous discovery of the Key Marco site (see Figure 2) in the late 19th century revealed that Calusa material culture exhibits finely developed skills of wood-carving, shell-tool development, cordage and net-making, and decorative arts. A great variety of shell tool types have been identified from Calusa artefacts, illustrating the ingenuity of the Calusa who lived far from the closest lithic sources which could be used for tools. The abundance of shell which accumulated as a result of shellfish consumption also provided the Calusa with a building material that was used to create mounds and other landscape features. These shell features were also used as foundations for architectural features.

Overall, the Calusa appear to have been only peripherally involved in the large prehistoric trade networks in the Southeast. In the wake of this trend, specific artefacts found in South Florida which date to protohistoric times contain similarities which suggest only a loose connection to the Southeastern Ceremonial Cult (SECC) which flourished at sites such as Spiro, Oklahoma, Moundville, Alabama, and Etowah, Georgia. The Calusa were probably peripheral participants in the much wider protohistoric SECC tradition which blanketed the Southeast.

Following decades of sporadic unofficial contact between Europeans and the Calusa, Menéndez de Avilés was sanctioned by the Spanish Crown to map the Florida coastline and to establish Spanish colonial settlements in Florida. Reaching the east coast of *La Florida* in 1565, Menéndez established St. Augustine, destroyed Fort Caroline which had been established by French Protestants, and in 1566 began exploring the west coast of Florida.



Figure 2. Location of Key Marco Site

Much of our current knowledge of the Calusa culture is derived from European descriptions dating to that time.

During the mid-16th century, the Spaniards describe the Calusa as militarily powerful, devoted to their pagan religion, and guided by the decisions of their Calusa chief. The role of the cacique was an important one within the politico-religious structure developed by the Calusa. This powerful position of the cacique carried with it the grave responsibility of following sacred rituals to ensure success, and when necessary, intervening to influence earthly forces on behalf of the Calusa.

The area of Calusa control expanded and contracted for what was probably a variety of reasons. There is no doubt, though, that the Calusa influence was felt throughout the Florida peninsula. Figure 3 represents the area of Calusa influence by the mid-16th century. Sometime thereafter, the area of Calusa influence appears to have expanded to include Tampa Bay following a demographic collapse in that area caused by the introduction of European diseases.

Calusa influence was backed by the threat of military reprisals from the Calusa. The development of social stratification allowed the presence of a class of warriors dedicated solely to military actions. The larger the warrior class, presumably, the greater the opportunity for military success. Calusa military might played a role in controlling vassal villages. Threats of reprisal by the Calusa were made and kept, according to Spanish reports. Military protection may have led to the cooperation of vassals who further strengthened the military might of the Calusa by providing additional warriors who were



Figure 3. Calusa Area of Influence

subject to the orders of the Calusa cacique.

There is evidence that the Calusa were able to muster thousands of warriors on short notice to carry out military actions. Without their alliance, the Spanish found themselves in constant danger along South Florida shores. In particular, the loss of treasure fleet cargo and shipwreck survivors to the Florida Indians was detrimental to the Spanish success in the New World. Therefore, Menéndez sought peace with the Calusa as well as a possible cross-peninsular water route to avoid the navigational hazards of the Bahama Channel.

Contact with the Spanish provided the Calusa with highly prized European trade goods. But efforts to Christianize the Calusa were less eagerly accepted. Calusa hostility towards the Spanish missionaries resulted in the abandonment of the first mission established among them. Over a century later, a second mission was brought to the Calusa at the specific request of the Calusa chief or *cacique*, but ended in the forcible ejection of the missionaries when European trade goods were spent.

It is within this framework that the Calusa are examined. Specifically of interest is the fact that the Calusa culture remained intact for nearly two centuries following official European contact. It is suggested that a variety of strategies and circumstances provided the Calusa with a buffer from the Spanish that permitted the extended survival of the Calusa culture. Crucial to this argument is the depth of the Calusa culture in prehistory which played a vital role in the early development of the Calusa chiefdom and served as the playing field on which European Contact took place.

Pursuit of the question of isolation is undertaken via several avenues. The development of the Calusa culture in prehistory is considered in order to establish cultural continuity through time as it is present in the archaeological record. Theories regarding the development of the Calusa are also explored. The prehistoric development of the Calusa chiefdom provided a basis for Calusa response to European Contact. Spanish interaction with the Calusa involved: 1) negotiations for peace and alliance; 2) efforts to convert the aboriginals to Christianity; 3) threats of retribution for the killing of Christians; and 4) establishment of an unofficial trade relationship. In every instance, the Calusa retained their autonomy.

Limited early contact with the Spanish and the isolation which followed were probably major factors in protecting the Calusa population from deadly European diseases. But the historic survival of the Calusa for two hundred years failed to save them from ultimate extinction. By the 1760s, European-introduced disease along with warfare from intruding aboriginals appear to have led to the demise of the Calusa along with all native Florida cultures. With the loss of Florida to England in 1763, the Spanish prepared to evacuate all Spanish subjects to Havana, including Christian aboriginals. At that time, a small band of Calusa was reported to be living near Miami and that band requested transport to Cuba, promising to become Christians once there. This is the last known recorded gasp of the once powerful Calusa culture:

Research into the lifeway of the Calusa and their interactions with the Spanish is based on archaeological data and historical documents. But both of these avenues of investigation are limited. These limitations are considered in Chapter 2 which seeks to establish an overall methodology to guide the research objectives of this thesis.

CHAPTER 2. METHODOLOGY

The earliest known references to the Calusa Indians of Southwest Florida describe a powerful chiefdom of thousands of aboriginals. Mid-16th century encounters between the Spanish and the Calusa, including the establishment of a short-lived mission, were documented by the Spanish. For the next 150 years, references to the Calusa in the historic documents are limited. By the end of the 17th century, a second mission attempt by the Spanish finds a thriving Calusa culture. But like so many other Native American cultures, by the mid-18th century, the Calusa culture had collapsed. In the 1760s, historic records reflect only a small number of aboriginals identified as “Calusa,” and the few remaining were soon languishing in Havana. Today shell mounds and middens, many covered with subtropical vegetation, stand as the only visible testaments to the Calusa and their lifeway. Thus, theories and methods used to study the Calusa must be oriented towards understanding a vanished culture that left no written records of their own. In this instance, historic documents and archaeological data are the only sources available with which to study the now extinct Calusa society.

The primary objective of this study is to identify potential factors which contributed to the survival of the Calusa culture following European Contact. The persistence of the Calusa culture over a period of approximately 200 years during historic times is in many ways different from the experiences of other Florida native cultures. The themes of cultural continuity and isolation from Europeans characterize the Calusa culture and will be discussed throughout the study.

Current Anthropological Trends

Investigation of the Calusa requires a blend of methodology which takes into account both historic and archaeological data. Essentially, this runs counter to past anthropological trends. The tendency for specialization in both prehistoric and historic archaeology has until recently dominated the field of anthropology, but is detrimental to efforts to understand cultures at the time of contact. As each specializes and ignores the findings of the other, the depth necessary for a clear understanding of cultural change is compromised. To understand historical changes within a culture, it is necessary to have a picture of the culture in prehistory in order to have a framework for change. In fact, some have called for a return to a more holistic anthropological approach, including the use of ethnohistorical accounts, ethnographic observations, linguistic data, native oral traditions, archaeological materials, and biological remains (Lightfoot 1995).

Similarly, the pursuit of an *anthropology of history* is considered by Sahlins as the combination of archaeology and social anthropology (Sahlins 1992). This concept appears to mirror in some ways *ethnohistoric archaeology* in American archaeology.

A more holistic approach lends support to a multidisciplinary effort. Deetz has recommended a multidirectional approach which drives a multidisciplinary effort. He argues that a multidirectional approach is required in the process of conducting historical archaeology, beginning with the evidence resulting from the archaeological resources. He writes that:

Multidirectional in this context means working back and forth between the documents and what the site has produced, constantly refining and reformulating questions raised by one set of data by looking at it against the

background of the other (Deetz 1995:159).

This can be seen as a process which can be utilized in building a more comprehensive understanding of the archaeological data. Deetz also states that regional historiographies should be used in better understanding specific archaeological sites which are bound to reflect regional histories. Through this type of analysis, a greater comprehension and explanation of a site is available (Deetz 1995:160-1).

Perhaps the most challenging aspect of protohistoric studies is the fact that Native American societies were impacted by Europeans prior to face-to-face contact via the introduction of diseases and shipwrecked material culture. Therefore, it is imperative that researchers clearly understand the prehistory of those societies in order to fully understand the long term impacts of European Contact. Then, true comparisons can be made of the society as it existed prior to and post Contact (Lightfoot 1995:200). Current anthropological trends, then, appear to emphasize a multidisciplinary effort, and in particular, a relationship between historic and anthropological methods.

Ethnohistoric Archaeology

The overarching methodological framework chosen for this study is ethnohistoric archaeology which is a multidisciplinary approach seeking to integrate the data and methodologies of ethnography, historiography, and archaeology (Brain, Toth, and Rodriguez-Buckingham 1974:284 in Brain 1988:10). An ethnohistorical approach utilizes ethnohistoric data as a basis for the creation of a picture of the culture under investigation. When used in conjunction with archaeology, this becomes ethnohistoric archaeology.

Ethnohistoric method is applied to Native American cultures which have survived into proto historic and historic times. The use of historical documents in this case requires an ethnohistoric approach since the cultures written about -- Native Americans -- are documented by the literate European culture. The viewpoint, purposes, and intent of the writer must be gauged:

It is a methodology for extracting ethnic and cultural information from historical documents, although the documents originally may not have been intended to convey such information (Brain 1988:9).

Ethnohistoric archaeology, then, incorporates an ethnohistoric approach within an archaeological study. Synchronic and diachronic portraits of the culture studied can be pursued using this methodology (Brain 1988:8-11). Archaeological data united with ethnohistoric data can provide a more complete cultural portrait which is better framed in both time and space.

Archaeological Data

Archaeological data supporting the cultural continuity of the Calusa culture in prehistory and identifying factors which resulted in the isolation of the Calusa from the Spanish can be found in the archaeological record. Unfortunately, only a limited amount of professional archaeological research has taken place in Southwest Florida. Therefore, identification of cultural time periods and other data represented at known archaeological sites is sketchy at best.

What has been established is a coherent classification of general time periods which represent Calusa cultural developments through time. These reflect changes in material

culture which have been observed from the archaeological data and provide a framework for understanding changes within the prehistoric Calusa culture. In addition, the currently known distribution of Calusa archaeological sites within the landscape provides compelling evidence regarding the use of the environment as well as the Calusa location with respect to neighbouring cultures. Unfortunately, the reconstruction of settlement patterns is not possible at this point in time. Additional research is necessary to provide time periods of known sites as well as the location and identification of inland sites which have largely been ignored.

As is evident, the archaeological data gathered concerning the Calusa culture creates more questions than answers. Further archaeological investigations within the Calusa territory may reveal evidence of demographic collapse due to diseases. In addition, an understanding of the relationship between Cuban fishermen working on the barrier islands off the coast of Southwest Florida with the Calusa during the 17th and 18th centuries should provide evidence of an independent, trade-oriented Calusa culture. Archaeological investigations into these fishing rancheros should prove to be highly fruitful.

One methodological avenue of archaeological investigation which leads to a better understanding of proto and prehistoric cultures is the direct historical approach. The direct historical approach is an ethnohistoric methodology developed specifically for solving an archaeological problem (Brain 1988:9). A component of ethnohistoric archaeology, the direct historic approach can provide comparisons of Calusa culture through time (Brain 1988:8-11).

In the 1940s, Julian Steward introduced the concept of the direct historical approach. Steward is critical of the 'taxonomic method' which seeks to classify cultures based solely on the association of cultural elements with no regard to time and space. Instead, Steward feels that the taxonomic method should be used in conjunction with the direct historical approach which he describes as follows:

Methodologically, the direct historic approach involves the elementary logic of working from the known to the unknown. First, sites of the historic period are located. These are preferably, but not necessarily, those of identified tribes. Second, the cultural complexes of the sites are determined. Third, sequences are carried backward in time to proto historic and prehistoric periods and cultures. This approach has the crucially important advantage of providing a fixed datum point to which sequences may be tied. But, far more important than this, it provides a point of contact and a series of specific problems which will coordinate archaeology and ethnology in relation to the basic problems of cultural studies (Steward 1942:337).

The direct historical approach in archaeology is considered by Steward as crucial to the understanding of culture change. He argues that no taxonomy is required in order to use archaeological data obtained via the direct historical approach and that instead, it is useful in answering directly problems of specific peoples -- tracing culture changes, migrations, and other historic events backwards to protohistoric and then prehistoric times (Steward 1942:339-340).

Previous obstructions to the use of the direct historic approach included a lack of historical data regarding whole regions of North and South America. Since the publishing of Steward's article, most areas in both continents have gained much in the way of historical knowledge.

While certain historic colonial settlements have gained much archaeological interest in the

recent past, other areas also visited and inhabited by Europeans remain more or less unexplored. Even acknowledging these limitations, this does not preclude the use of the direct historical approach to the greatest extent possible with the Calusa culture.

Use of the direct historical approach with early contact sites is considered by Steward one way to unravel the misconceptions of prehistoric cultures. The reconstruction of prehistoric cultures based on historic phenomena is fraught with peril due to the impacts of European contact which preceded face-to-face encounters in the form of invisible deadly diseases to salvaged European material culture from shipwrecks. In addition, the differential nature of these impacts means that clusters of villages and entire regions were often affected in different ways and to varying degrees. Therefore, the direct historical approach must be used with great care (Steward 1942:340-41).

Steward states that,

Whether the objective of cultural studies is broad cultural sequence or detailed information on the history of a specific people, the contributions of archaeology will be more or less proportionate to its success in using the direct historical approach (Steward 1942:341).

Early Contact sites may provide some information as to earlier Calusa cultural forms, but as noted above, the reconstruction of prehistoric cultures based on historic phenomenon must consider the affects of European Contact. Particularly troubling is the amount and time-depth of Contact impacts which occurred prior to face-to-face encounters between the Calusa and Europeans. Diseases were likely to have spread between native communities once introduced by European Contact. European material culture as well as material culture from Central and South American peoples were shipwrecked on Florida shores and provided

ample opportunity for introduction to Florida natives.

There are additional difficulties in seeking a pre-Contact picture of Calusa culture. These difficulties stem from our limited knowledge of the prehistoric Calusa culture. Whilst the information recorded at Contact by Europeans following face-to-face encounters provides a relatively clear picture, archaeologists are only beginning to provide details of the prehistoric Calusa culture because long-term archaeological research in Southwest Florida has only begun recently.

By using accounts of Menéndez de Avilés' first official encounters with the Calusa, such as Fontaneda (held captive by the Calusa) and those of early explorers and of the missionaries who lived among the Calusa, an overall concept of the historic Calusa culture can be developed. From this picture of the Calusa culture at Contact, continuity can be sought in the protohistoric and prehistoric archaeological sites.

Limitations of the Archaeological Data

Some concerns associated with the archaeological data have been discussed above, but there are additional limitations that exist. The archaeological resources of Southwest Florida have been subjected to the same kinds of naturally destructive forces which are prevalent on a global scale. But the subtropical environment of southern Florida has resulted in an even greater loss of organic materials within archaeological deposits over time.

As a matter of natural processes, textiles, wooden artefacts, cordage, matting, housing materials, animal products such as hides and feathers, paint, and other materials break down

under the hostile Florida sun and humidity. High acidity within the sandy soils complete the task of removing these materials from the archaeological record.

Archaeological resources in the Calusa 'heartland' have been subjected to a variety of additional disturbances which began with the influx of Seminole Indians into this area in the mid- to late-18th century. Pioneer settlers began arriving in numbers in the mid-19th century. Many of these pioneers settled on or near shell middens and mounds formed by earlier inhabitants. Shell that was not built on was more often than not removed for use in road beds or leveled so that the land could be more easily farmed or developed.

Today, development pressures continue to harm and endanger archaeological resources that hold clues to the Calusa culture. Along the coast where development is especially rampant is also the locale for what appears to be the bulk of Calusa archaeological resources. "Pot-hunting" has been and continues to be a pervasive problem as well. Sophisticated machinery is now used by "pot-hunters" to sift through tons of sand and/or shell in search of artefacts to sell in a thriving black market. Isolated mangrove islands provide the setting for many of these covert activities.

Whilst a picture of the Calusa culture is beginning to become clear through professional archaeological investigations, a mind-boggling number of unprovenanced artefacts collected in the past and present also plague the researcher. Seeking patterns in artefacts becomes a nearly impossible task when the data are necessarily checkered. In particular, metal artefacts were avidly collected for decades by many people. Many of these metal items were introduced through Contact and are crucial to our understanding of cultural interaction

between the Europeans and aboriginals. When collectors allow artefacts to be viewed, the data regarding provenience is often sketchy, but it is the best data that can be gathered due to the circumstances of recovery. Other artefacts are simply unavailable to researchers -- sold on the black market, destroyed by development, or squirreled away and forgotten by a past collector.

In the shadow of this high level of disturbance, professional archaeological investigations of the Calusa date to the late 19th century. In 1896, Frank Hamilton Cushing excavated the Key Marco site near Naples, Florida and effectively put Florida archaeology on the world map. Cushing's work led to the recovery of thousands of wooden artefacts which had been preserved in the ancient mangrove peat muck bed. Despite this great time-depth to archaeological research in Southwest Florida, investigations have not been continuous. Since that time, there have been significant contributions to our knowledge concerning the Calusa through professional archaeological excavations, most of which have occurred within the last fifteen years under the direction of Dr. William Marquardt with the Florida Museum of Natural History and the University of Florida, director of the "Southwest Florida Project." Marquardt's work marks the development of long-term research-oriented archaeological investigations within Southwest Florida.

The unfortunate state of data concerning archaeological sites in Southwest Florida is exemplified by an archaeological site inventory which was performed in 1987 for Lee County (which contains much of the Southwest Florida coast inhabited by the Calusa). The final report from the site inventory states that:

. . . despite the large number of known sites, almost nothing is known about

the majority of them. At a minimum, most of these sites need to be visited to determine the exact location and present condition, and some sites warrant more intensive investigation (including subsurface testing) to determine their content and potential significance (Austin 1987:35-6).

As a result, only general statements can be made based on this limited data. Coastal sites represent the bulk of known Calusa sites to date due to the focus of recent development in coastal areas. Therefore, efforts to present an accurate settlement pattern for the Calusa, for example, would be based on skewed data which fails to take into account interior sites because the data base is incomplete in that area. With these limitations, general comments are appropriate, but more detailed reconstructions would be more conjectural than explanatory of any existing data.

Historic Data

As with many native cultures subjected to Contact, an entirely historical or an entirely archaeological approach to research of the Calusa would provide an uneven, unbalanced, and inaccurate view of the Calusa culture. Historic data pertaining to the Calusa fills gaps left in the archaeological record. But the use of historic data also requires caution.

A concern expressed by historians about anthropologists and the process of historical archaeology is a tendency to overgeneralize and disregard the complexity of the past (Deetz 1995:11-12). Conversely, anthropologists criticize historians for their particularist studies. Somewhere within those parameters, a more practical approach must be sought. For the anthropologist, this requires a finer rather than a broader brush stroke.

In Southwest Florida, Spanish documents describing the Calusa reflect a prehistoric

component as well as an historic native culture reacting to and impacted by the Spanish culture. In this study, the archaeological data is examined within the context of both the historical documents and the historical setting. There exist several historical accounts of the Calusa. These accounts are from early explorers, missionaries, shipwreck survivors, and early Spanish administrators. Due to the extinction of the Calusa culture, the descriptions made by Europeans of their encounters with the Calusa must serve as ethnographic data. This ethnohistoric data serves to provide an understanding of that culture within an historical reference.

A global approach to historical archaeology has been developed in an effort to better understand European Contact in the New World. Ethnohistoric archaeological methodologies face these same issues of international interaction. The effects of the European invasion of the New World had wide-reaching impacts that changed the world.

Historical archaeology...must adopt a global perspective on its data, for when the first European sailing ship set out for distant parts of the world, a chain of events never before seen in human history was set into motion. Two worlds that had been separate from each other for millennia suddenly were brought into close contact, with spectacular and often catastrophic results (Deetz 1995:13).

Once European Contact was established, a variety of causes created many multicultural communities:

The establishment of European colonies also had a rippling effect well beyond the colonial frontier, as native villages in defensible, inaccessible places became refuges where people from many different homelands congregated for mutual protection (see Heizer 1941:105-112; Ferguson 1992:44;49-50; Merrill 1994; Phillips 1981:33-40). These renegade communities provided safe havens for runaway slaves, escaped neophytes, criminals, and disenfranchised peoples. As Merrill (1994:126-133) stresses, some of these enclaves, especially those involved in raiding colonial settlements, were quite diverse in ethnic composition, including members of

different native tribes, many peoples of 'mixed blood,' escaped Africans, and outlaw Europeans (Lightfoot 1995:201).

The development of modern cultures, including Native American, is a construct of these types of multicultural interactions, and it is necessary to study these historic interactions in order to fully understand the current culture.

European colonial expansionist activities in Florida involved Spain, France, and England. To be a useful methodology in the exploration of native Florida cultures, ethnohistoric archaeology must recognize the issues surrounding Old World and New World interactions. More recently, historical archaeologists have begun to cast their nets beyond the study of European material culture within these colonial settings. They are beginning to research impacts to Native American culture by Europeans (Lightfoot 1995:201-2).

Researchers focusing on the Calusa culture prior to *official* European Contact necessarily must consider the affects of slave raids in the West Indies and Florida coasts, European diseases, European material culture from shipwrecks, and unofficial expeditions to Florida coasts on protohistoric native cultures. Post-Contact impacts following the first official encounter were equally numerous, although more easily identified due to historic records. Explorers, missionaries, shipwreck survivors, and colonists all wrote accounts which today shed light on the Calusa culture.

Limitations of Historical Data

Despite the existence of these ethnohistoric documents, historic data concerning the Calusa is limited in scope. Whilst early historic documents describe the Calusa culture seen by the

Spanish, the continuous posture of hostility shown by the Calusa towards Europeans resulted in the avoidance of the Calusa by the Spanish after initial contact. What seems clear from the documents is that Calusa hostility towards the Spaniards was powerful and continuous throughout the 16th, 17th, and 18th centuries.

These documented early interactions between the Spanish and the Calusa are vital to an understanding of how the Calusa maintained their culture for nearly two centuries after the first official European Contact in 1566. Unlike the native cultures in North Florida which were impacted heavily by European influence and soon no longer resembled their pre-contact forms, the Calusa reacted with hostility towards the Spanish, deflecting the Europeans from the Southwest Florida coast.

Differential rates of acculturation across time and space means that Native American cultures responded in different ways to the same types of impacts from Europeans. Within Florida, this is most pronounced between northern and southern cultures which were fundamentally different prior to Contact.

Only during the mid-18th century when northern aboriginal tribes began pushing into Florida thereby disrupting the Calusa, does there appear to be an alliance between the Spanish and the Calusa. If historic records are correct, a small band of Calusa were living in the area of present-day Miami and asked the Spanish to move them to Havana in 1763 when Florida passed into English control. By this time, the Calusa were nearly extinct.

Most historic accounts, then, describe the hostile actions of the powerful Calusa towards the

Spanish. Each document is skewed by the world view of the writer who in writing his account is pursuing a specific agenda. It is within this ethnocentric frame of reference that each account must be considered using an ethnohistoric methodology. Particularly useful are the accounts of Fontaneda who was a shipwreck survivor made slave to the Calusa for several years, Menéndez de Avilés whose descriptions of his dealings with the Calusa aid in an understanding of Calusa alliance and warfare, and the accounts of the Spanish missionaries which yield details of the Calusa culture in their description of ‘heathen’ practices.

Fortunately, the extensive amount of Spanish bureaucracy in the New World resulted in a plethora of historic documents. Hann’s book, Missions to the Calusa (1991) contains translations of many documents which grew out of Spanish efforts to establish missions on the Southwest Florida coast. Additional historic documents may exist which refer to South Florida cultures, but Marquardt believes that, “...the point of diminishing returns is probably being reached in the Archivo General de Indias (AGI) in Seville” (Marquardt 1991:xix).

Because Havana, Cuba served as the key Spanish administrative centre in the New World to which the South Florida natives turned, I believe that archives dating to the earliest official contact between the Spanish and the Calusa may exist there. As the relationship between these two nations thaws, opportunities for research and collaboration may emerge.

Some of the most descriptive narratives available regarding the early encounters of Europeans with the Calusa and other Florida natives are a part of the work of chroniclers who have utilized a vast number of original documents to develop a compendium of

historical events. It was common practice from roughly the 16th-18th centuries to compile histories based on a wide variety of sources. Unfortunately, resolution of any discrepancies was attempted by the chronicler who did not always bring the reader's attention to the discrepancy.

For example, Garcilaso de la Vega claims to have based his account of De Soto's explorations of the Southeastern U.S. primarily on information garnered from three eyewitnesses to the De Soto expedition: an anonymous Spanish cavalier -- probably Gonzalo Silvestre -- and soldiers Juan Coles and Alonso de Carmona (Varner and Varner 1996:xxii-xxiii). But translators Varner and Varner remind the reader that Garcilaso de la Vega's account of De Soto's explorations of the southeastern U.S.:

...was a product of the thought and the literature of the Spanish Renaissance. His was an age when fact was likely to be confused with fiction and serious chroniclers were prone to give credence to the marvelous. Moreover, cavaliers were well-versed in the chivalric cycles and frequently sought to imitate in reality the roles of some legendary hero. Hence, a correct picture of these adventurers sometimes required that they be presented in a gilded frame...

Because the presence of so much of the romantic in Garcilaso's account, many historians, while admitting its essentiality to a study of De Soto's expedition, have been careful to warn readers to regard it with suspicion, admonishing them to beware of the poetic passages and probe deep for the truth -- an admonition which it of course is wise to heed even in the case of many better known and more generally recognized historical classics. (Varner and Varner 1996:xxxii-xxxiv).

Similarly, first published in 1723, Barcia's Chronology of the History of Florida provides a great amount of detail to events which occurred in the early history of Florida. The author, Barcia, lists several primary resources associated with the Indies which he used in developing his history of Florida from approximately 1500 to 1700. Because a great number

of Barcia's sources are reports made by those who had traveled to the West Indies and Florida, their accounts may be the best available. But it must be remembered that each author used as a source by Barcia was driven by a specific purpose to travel to the New World, and that purpose is often reflected in the accounts. Therefore, while Barcia's sources are often firsthand accounts concerning Florida natives, they are also plagued by an agenda that undoubtedly skewed the perception of the author. Barcia's chronology includes the use of reports by French explorers, Spanish explorers, religious personnel (French and Spanish), cartographers, and Spanish administrators in Florida and the West Indies.

Historic data also offer opportunities to study ethnographic parallels. The use of ethnographic parallels in studying the Calusa culture has limited explanatory value due to the lack of comparative cultures. For example, native cultures of the Northwest Coast of the U.S. are marine-oriented in subsistence and have an abundance of material culture which often times resembles that of the Calusa. The drawback to any structural analogies lies in what is known about the political systems of each. The Northwest Coast cultures at the time of European contact were essentially centred on political leaders who received such status more or less by group consent. Indeed, their powers were based more on *influence* and *acquired status* than the *inherited status* of Calusa leaders. Therefore, the similarities between Northwest Coast cultures and the Calusa are probably a result of appearances rather than reality.

As an additional example, each of the Northwest Coast cultures remained separate and distinct with no one group overriding the others. Perhaps a factor in this limited success was the looseness of their politico-religious connection. In contrast, the Calusa chief belonged

to a divine lineage and was viewed as all-powerful. Orders were to be obeyed and military might grew to the extent that all of the southern peninsula of Florida was at one time under Calusa control. At least during historic times, the Calusa heavily exploited a closely intertwined politico-religious structure which served as a basis for their military might.

The available historic data, then, provides a vast amount of information about the Calusa, but which must be thoughtfully reviewed. The most difficult aspect of these ethnohistoric documents is the skewed viewpoint of the authors. Historic documents referring to the Calusa are utilized with this in mind. Additionally, these historic documents are limited in scope based on the types of data recorded for specific purposes and therefore they do not provide a complete picture of the Calusa. For example, those interested in religion recorded Calusa religious beliefs, but often did not document Calusa subsistence behaviour.

Summary

This study uses an ethnohistoric archaeological approach to the anthropological inquiry of Calusa isolation from the Spanish following Contact. Calusa cultural survival for nearly two centuries after Contact was a significant result of this isolation. Whilst this work presents a rather straightforward process of isolation, a mixture of factors and events unique to South Florida culminated in this isolation.

Chapter 3, then, begins a broad summary of cultural development through time which illustrates a great deal of continuity even as the Calusa culture emerges from the vestiges of the Late Archaic. It is this basis of cultural continuity and the probable early prehistoric development of a chiefdom structure which provided the basis for the Calusa culture at the

time of Contact. Chapter 4 more thoroughly explores the Calusa culture and provides a background for the discussion of isolation during the historic period.

Whilst the direct historic approach would move from historic descriptions of cultures and knowledge of their material culture to a review of prehistoric cultural characteristics in order to link historic cultures to their prehistoric antecedents, I have chose to present information about Southwest Florida cultures in a purely chronological fashion. My actual research efforts have involved a back and forth movement between historically documented cultural data and our knowledge of prehistoric Southwest Florida cultures. There exists a strong theme of cultural continuity from the prehistoric through the historic era in Southwest Florida.

CHAPTER 3. REGIONAL PREHISTORY

Most archaeologists would agree that, "... the questions of when people first arrived, how and when they dispersed, and how Palaeoindian culture developed are some of the biggest issues in American archaeology" (Bense 1994:38). It is into the light of controversy that one steps when attempting to untangle the data regarding early American populations. The prehistory of Florida and the Southeastern United States is, in fact, amongst the earliest known in the Americas.

The most popularly accepted version concerning the arrival of the first Americans is that:

...during the last glaciation, a time when sea levels were as much as 320-380 feet lower than they are today due to the huge amounts of water frozen in glaciers, people walked from easternmost Asia into Alaska across a dry 'land bridge' that was at least 1,000 miles wide (Milanich 1994:37).

But new migration theories are beginning to emerge in the midst of interesting new data.

Pre-Clovis

The idea of a Pre-Clovis population of Palaeoindians is beginning to gain support as evidence of archaeological sites with early dates mounts in both North and South America (Gibbon 1996; Roosevelt *et al.* 1996; Whitley and Dorn 1993; Pringle 1998; Sandweiss *et al.* 1998; Keefer *et al.* 1998; Hall 1998; and others).

For example, the work of Anna Roosevelt and others in the area of Monte Alegre (see Figure 4) which is 10 kilometres west of the lower Amazon River has caused archaeologists to reconsider both the food resources available within rainforest environments as well as migration theory since this archaeological site appears to have been occupied when it was

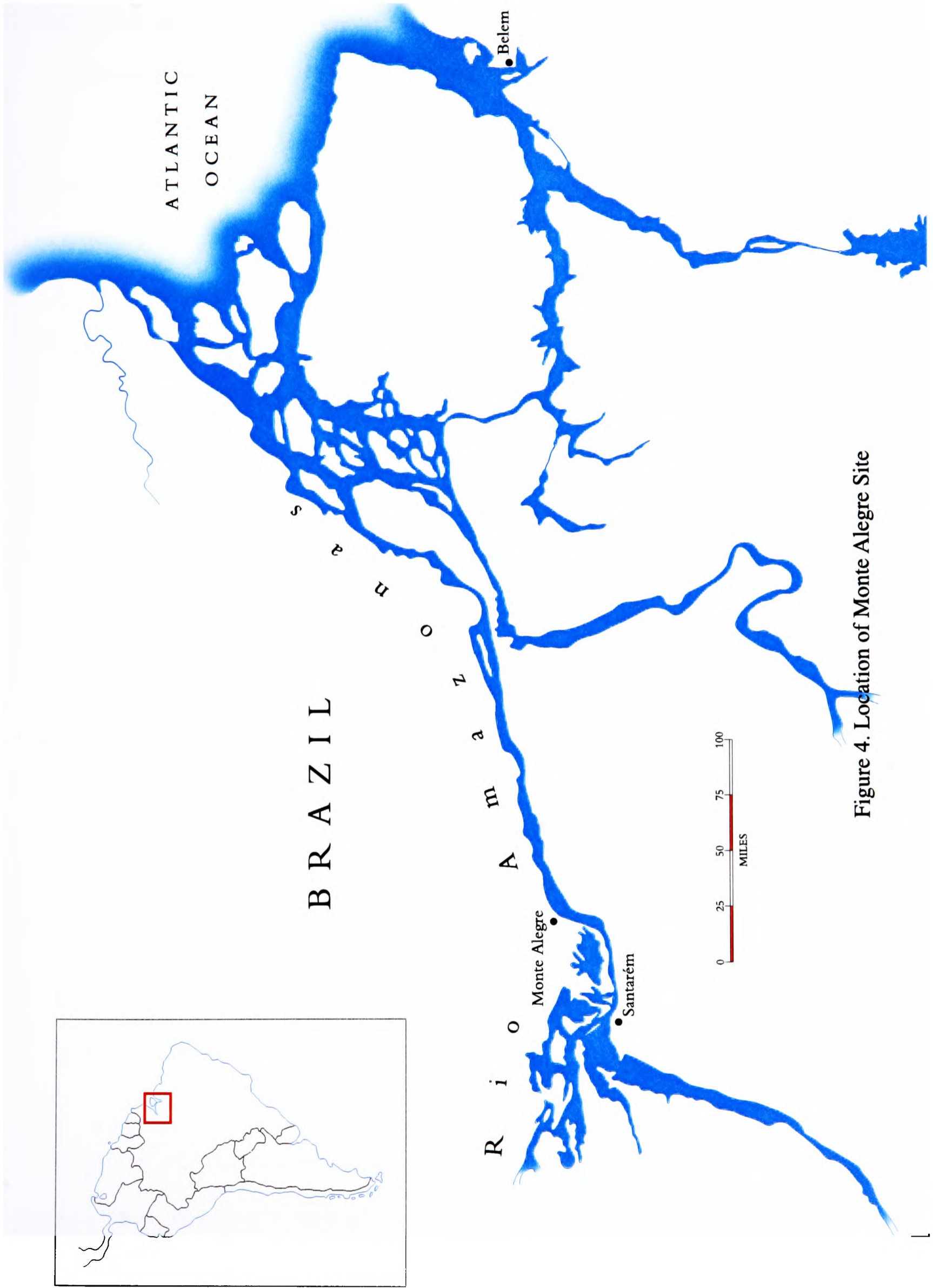


Figure 4. Location of Monte Alegre Site

a rainforest and dates to Clovis times (Roosevelt *et al.* 1996). Sites dating to Clovis times in South America raise the question of migration since Clovis populations in North America do not appear to have been the source of South American populations.

Land Masses and Sea Level

Despite these controversies concerning the earliest Americans of which I have only touched upon here, palaeoenvironmental conditions are better understood. During the peak of the last glaciation, land masses had expanded with the lowered sea levels and often, distances separating land masses were lessened. Figure 5 shows portions of North, Central and South America and the approximate location of the current 100 metre bathymetric contour which represents the former coastline from the peak of the last glaciation. Peninsular Florida, East Texas, and the Yucatan are all areas where land mass was greatly increased. This may have facilitated movement between land masses around the Gulf of Mexico.

Evidence of Palaeoindians in Florida, then, must be carefully scrutinized. Not only were certain land masses larger and therefore closer to one another, but the water which separates Florida from South America, rather than a barrier, may have been a conduit for activity. By water, a Palaeo culture may have migrated to Florida from South America rather than moving across the North American continent and southeastward from Beringia. Whilst this is purely speculative, there is a body of data which illustrates the able capabilities of ancient maritime technology.

As early as 1947 Thor Heyerdahl and a small crew successfully sailed a balsa raft (Kon-Tiki) from Peru to Polynesia, illustrating the capabilities of simple maritime technology. In the

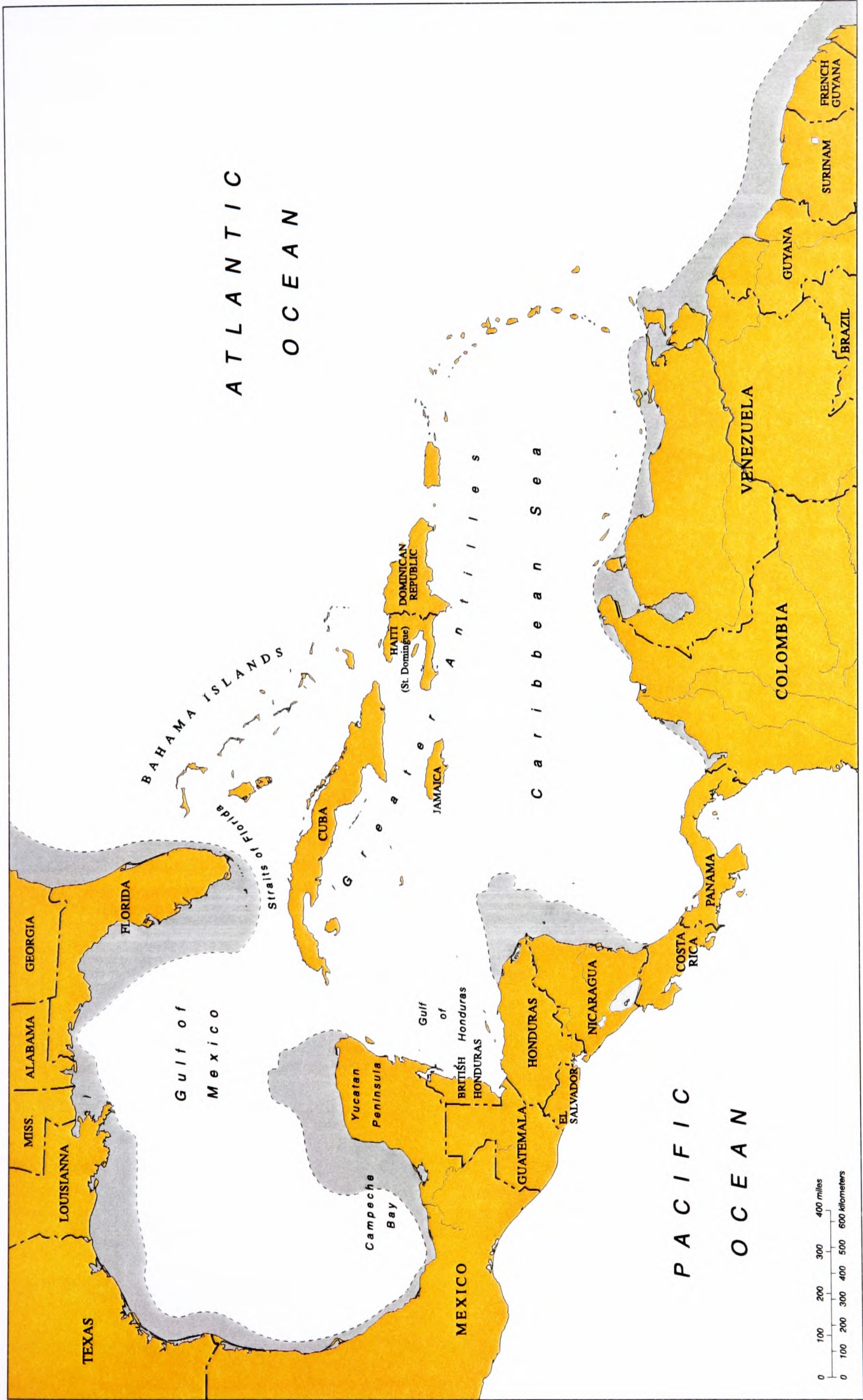


Figure 5. 100 Metre Bathymetric Contour

late 1960s and early 1970s, Heyerdahl also sailed two reed boats (RaI and RaII) from Northwest Africa to the Northeast coast of South America. The second effort was entirely successful and again, illustrated that ancient maritime technology was adequate for transoceanic voyages (Heyerdahl *et al.* 1990). Despite Heyerdahl's successes, these types of results have been minimized.

Until further research provides adequate data to elucidate these problems concerning Palaeo cultures, we must turn to the solid archaeological evidence which substantiates human occupation of Florida at around 12,000 years ago during the end of the last glaciation.

Generally, it is believed that Palaeo people and their descendants moved into the Americas, reaching Florida at this time when peninsular Florida was twice the land mass it is today (Milanich 1994:37-8). Many archaeologists have touted a Palaeo migration that entered peninsular Florida from the north, possibly following big-game herds (Purdy 1996a:11-12). These are the basic tenets that have moulded archaeological theory and thought on Florida Palaeoindian cultures.

Palaeoindian Period (10,000 B.C. -- 7,000 B.C.)

The environment was much drier and cooler due to the effects of the glaciation during the Palaeoindian Period and the Florida land mass was nearly twice what it is today (see Figure 6). Little is known about Palaeoindian culture, although Palaeoindian artefacts across the U.S. are greatly similar (Milanich 1994:48 and Bense 1994:39). The Palaeoindians may have been hunters entering Florida to follow the big game herds during a time when Florida was a desert at the end of the last ice age (Purdy 1996a:11-12).

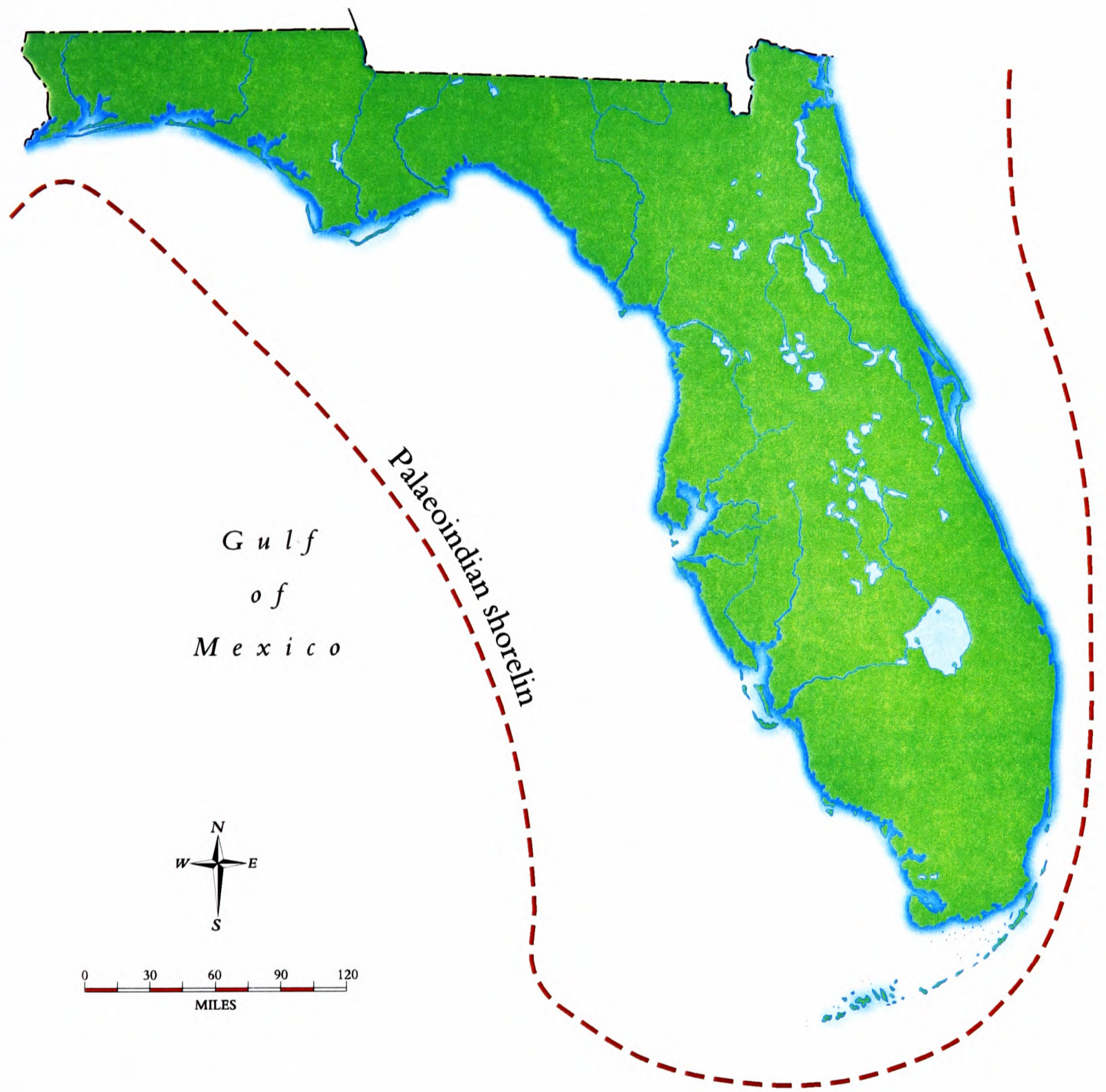


Figure 6. Palaeoindian Shoreline of Florida (after Milanich 1994:39)

Florida's Palaeoindian Period can be divided into three phases: Early, Middle, and Late based on differences in material culture which suggests differences in behaviour through time (Purdy 1996a).

The Early Palaeoindian phase is best known by the Clovis stone point which is a diagnostic artifact, dating only to this earliest period. Scrub oaks, pines, open grassy areas and savannahs covered Florida during this time period and megafauna which are today extinct were hunted and consumed by Palaeo populations (Milanich 1994:40, 47).

While probably utilizing every form of edible material in the landscape, Milanich also states that,

It will also be interesting to discover whether coastal resources, such as shellfish, and fish were a part of their diet. Research at inundated Paleoindian sites has the potential to provide such evidence, including plant remains (Milanich 1994:48).

Here Milanich has touched on one of the major obstacles in studying Florida Palaeoindians: miles of inundated former coastline.

The Middle and Late phases of the Palaeoindian Period are characterised by a predominance of Suwanee and Simpson stone points. Bolen Beveled and Bolen Plain Points are thought to be diagnostic of the Late Palaeoindian Phase (Purdy 1996a:11). The Middle Palaeoindian Phase is also characterised by a greater population density, a more diversified diet, and the beginning of regional differences, all of which continue through the Late Palaeoindian Period (Bense 1994:59).

Few Florida Palaeoindian sites have been discovered. Fewer still have been excavated. And the inundated Gulf coastal areas have hindered archaeological investigations of offshore Palaeo sites. Lacking a significant portion of the Palaeo material culture has forced archaeologists to create a Palaeo lifeway based almost entirely on fragmentary behaviour which is exhibited in the few materials that have survived through time and the landscape in which this evidence is discovered. Without more data to round out our vision of a Palaeo lifeway, archaeological descriptions will remain sketchy in nature. Conclusions about the Palaeoindians must remain tentative until further data is available.

Archaic Period (7,000 -- 2,000 B.C.)

The Archaic period heralded a world-wide climate change which resulted in warmer and wetter conditions in Florida. With this change in environment, the Archaic lifeway evolved. Sea levels rose with the melting of glacial features and many Ice Age animals became extinct. This extinction of many of the Ice Age animals appears to have led to the development of a lifeway that could not be dependent upon these animals as a major food source (Purdy 1996a:12).

Changes in the utilization of the environment, tools, and technology occur during the Archaic Period. Broader usage of the environment through the increased effectiveness in the exploitation of resources occurred. In addition, changes in material culture include the appearance of the atlatl (spear thrower) for the first time in the archaeological record which provides for greater distance, force, and accuracy in throwing spears. Archaic projectile points tend to be larger than Palaeo points which may reflect this new spear-throwing technology. Also, thermal alteration of silicified lithic materials occurs regularly during the

Archaic. By heating this type of stone, a more regular flaking pattern is possible, thus making stone tool manufacturing more predictable and therefore, more successful (Purdy 1996a:12-15).

Others assert that during the Archaic, there is a proliferation of stone tool types at the expense of refined technology that had been developed during Palaeo times. Thus there was a greater variety of stone tool types, but none display consistently superior workmanship than is found in Palaeo stone points.

Several archaeological wet sites dating to the Archaic have been discovered in Florida. These sites have been important in greatly increasing our understanding of that time period.

Wet Sites

Differential preservation plays an enormous role in archaeology and archaeological interpretation. It is important to note that many archaeological artifacts are those which have survived through time which means that they are often limited to stone and bone materials with little else. Wet sites in Florida have provided an opportunity to learn more about those materials usually absent from the archaeological record. Barbara Purdy states that, “Without the wood carvings from water-saturated sites, it would be easy to think of early Floridians as culturally impoverished because Florida does not have stone suitable for creating sculptures” (Purdy 1992:113).

There appear to be a greater number of archaeological wet sites that date to the Archaic Period in Florida than to any other time period. Citing patterns related to archaeological wet

sites dating from the Archaic, Purdy notes that these sites,

...share several attributes: (1) they are 'cemeteries' where the deceased were placed in shallow ponds or water-saturated organic deposits and staked down; (2) many burials, particularly those of children, were accompanied by elaborate grave goods; (3) all ages and both sexes are represented; (4) all but Bay West had human brain material preserved in some crania (it may have been present at Bay West also but was unobservable because of the way the site was disturbed); (5) organic materials survived in superb condition providing unprecedented insights about cultural practices, human physical characteristics, and environment; (6) these kinds of sites occur only during the time period noted above (the average age exceeds 6000 radiocarbon years...) (Purdy 1992:116).

These cemeteries which involve submersion of the dead within ponds or water features are prevalent within the Archaic Period. Milanich suggests that, "The importance of water to the early Archaic people may be exhibited in their returning their dead to a pond for final burial" (Milanich 1994:75).

To date, Florida archaeologists have merely recognized the implied importance of water -- some for its necessity for human survival and others for its general link as seen in various cultures to "other world" meaning. Disposition of the dead within a water context may reflect the beginning of an "other world" journey for the dead.

The Archaic can be divided into three phases: Early (7000 B.C.-- 5000 B.C.), Middle (5000 B.C. -- 3500 B.C.), and Late (3500 B.C. -- 2000 B.C.). These phases are generally based on differences in lithic technology through time (Purdy 1996a:15).

Early Archaic (7,000 B.C. -- 5,000 B.C.)

The Early Archaic is characterised by a wetter environment which allowed populations to

spread to areas that had been arid during Palaeo times. During this time, riverine and coastal areas were utilised not only for their subsistence resources, but also for semi-sedentary settlement purposes. Essentially, the more inviting wetter environment available during the Early Archaic allowed a more settled existence (with larger populations than nomadic Palaeo populations) as well as a broader habitable geographical range for the Early Archaic populations (Milanich 1994:63-4).

It is during the Early Archaic that there is the first evidence for the significant use of aquatic resources and cultural changes appear to begin, resulting in regional differences in material culture. Purdy states that, “Efficient utilization of aquatic resources probably formed the base for all later developments in Florida, including social hierarchies” (Purdy 1992:117).

The Windover Wet Site

The Windover pond cemetery site near Titusville (see Figure 7) falls within the time period of the Early Archaic, dating to 8000 B.P. Many grave goods are associated with child burials. Milanich suggests that the value of children may be reflected in this high number of grave goods associated with child burials (Milanich 1994:75). Children represented the future generations of the Windover population.

The preservation at wet sites such as Windover provide an unusual opportunity for archaeologists to confirm the existence of fragile organic artifacts such as fabric. At Windover, fabrics preserved in the pond with the dead were examined, providing fruitful results. Doran reports that:

Adovasio, the director of the fabric analysis, has commented that these



Figure 7. Location of Windover Site

materials constitute:

...the oldest, largest and technologically most sophisticated examples of flexible fabrics found in the Americas. Older examples of rigid and semiflexible baskets, mats and sandals as well as cordage and nets are known from many places, but there is no comparable assemblage of woven cloth like that recovered from Windover presently known to American archaeology (Adovasio pers. comm. in Doran 1992:129).

Regarding these textiles found at Windover, Purdy states that, "No other textiles have been found in Florida, and it is not until the introduction of pottery about 4,000 years ago that examples of textile designs reappear" (Purdy 1996a:18). These early and technologically sophisticated textiles provide direct evidence of a complex material culture.

The Kirk Serrated projectile point is a diagnostic stone tool for the Early Archaic. Purdy notes that:

At the Windover site, Kirk Serrated points were associated with organic materials that were dated from about 7,000 to more than 8,000 years old (Purdy 1996a:15).

Deer and smaller game along with hickory nuts and other plants were utilized during the Early Archaic. In addition, excavations at the Windover site led to the reporting of the earliest documented bottle gourd north of Mexico. A bottle gourd recovered from one of the burials at the Windover site has been dated to 7,290 + 120 radiocarbon years B.P. (Doran *et al.* 1990:356). Milanich reports that new evidence shows that wild gourds were present in Florida as early as Palaeo times and are probably native to Florida (Milanich 1994:264).

During the time that Windover was used for burials, 5-6000 B.C., the sea level was rising

and the rising water table inland, "...resulted in the development of the permanent standing-water features in South Florida such as Lake Okeechobee, the Everglades, and the St. Johns marsh system along the east-central peninsula" (Tuross *et al.* 1994:292). At the same time, the rich estuarine environments along the coast developed. Windover is north of the tropical/subtropical climatic boundary and is characterized by a variety of xeric environments as well as small areas of wetlands and mesic forests (Tuross *et al.* 1994:293). Whilst near the east coast of Florida today, during the mid-Holocene, Tuross *et al.* point out that the warm dry Hypsithermal would have placed Windover farther from the coast during the Early Archaic (1994:293). Therefore, marine resources would not have been as readily available at that time as they are today to the same area.

Tuross *et al.* state that:

Both the human and faunal bone collagen carbon- and nitrogen-isotopic data, independently and in tandem, support an interpretation of riverine-dominated subsistence by the peoples who used Windover... [T]he human diet was dominated by animal protein at the 'second' trophic level such as duck, turtle, and catfish and *not* by a heavy reliance on terrestrial foods such as deer and rabbit (1994:295).

The archaeobotanical remains from Windover along with three other Archaic sites show the use of prickly pear, grape, palm fruits and other seasonally available pulpy fruits. Primarily, the Archaic diet appears to have included the general gathering of fresh fruits. Acorns and seeds of wild plants were noticeably absent as any form of dietary staple (Tuross *et al.* 1994:299).

Archaeobotanical remains also show a midsummer/fall period of utilization at Windover based on the fruits and other plants associated with the burials. Whilst the authors conclude

that this may reflect seasonal mobility which resulted in seasonal occupation at Windover, they also state that these results may instead be related to the limited wet period seasonal use of the pond for burials (Tuross *et al.* 1994:297-9). The authors conclude that:

The overall human dietary pattern at Windover suggests a complicated and widespread use of seasonally available plants and riverine animals that could be nutritionally adequate in providing calories, protein, fats, carbohydrates, minerals, and variety (Tuross *et al.* 1994:300).

The Windover site has yielded interesting results from DNA tests. Due to recent advances in DNA testing, human remains from the Windover site may reveal possible clues to early migration into Florida. Regarding DNA testing, Doran states that,

Isolation and identification of prehistoric human DNA truly heralds a new method of analysis of archaeological materials (Rogan and Salvo 1990; Paabo 1985, 1989; Paabo *et al.* 1989; Paabo *et al.* 1990). Addressing questions of population genetics may now be possible not only with living populations, but with prehistoric ones as well (Paabo *et al.* 1989; Salvo *et al.* 1989; Cavalli-Sforza *et al.* 1988¹ in Doran 1992:131).

Ancient DNA can now be used to look for genetic relationships between ancient populations. Whilst further testing will enhance confidence, one noted finding at Windover states that:

. . . all individuals analyzed are positive for the A19 allele, but only three have the B37 allele initially identified in sample 335. Interestingly, this is consistent with recent studies of MHC-I alleles in contemporary South American Indians that found a surprisingly high diversity of B-alleles. It was suggested that HLA-B diversity may be due to a pressure to maintain resistance to a broad range of tropical diseases encountered during the initial southward migration in the Americas. Clearly, at the B locus Windover is multi-allelic, suggesting that this diversity may indeed be a characteristic of the early migrants into the Western Hemisphere. However, the view that maintenance of diverse B-locus alleles is related to tropical pathogen-driven mechanisms is not fully supported by the Windover study since this North American population presumably had not yet migrated through the tropics 8000 years ago (Hauswirth *et al.* 1994:588).

However, it is possible that migration to the peninsula of Florida from the tropics may indeed have occurred earlier than 8000 years ago as discussed earlier. The last glaciation, resulting in the lowering of the sea level would have provided opportunities for prehistoric migration from Central or South America, the Caribbean, West Indies, or Bahamas to Florida.

Surface water currents in the Gulf of Mexico show obvious advantages to water travel from south to north. These surface water currents are shown on the following figures (see Figures 8 & 9). These may have provided water travel from South America to the Southwest coast of Florida based on water currents alone.

Generally, this two thousand year time period of the Early Archaic provided a transition from the Palaeoindian lifestyle of nomadic big game hunting to a more regionalised and sedentary lifeway of the Middle Archaic (Purdy 1996a:19).

Middle Archaic (5,000 B.C. -- 3,500 B.C.)

During the Middle Archaic, environmental conditions were drier than today, but continued to be wetter than Palaeo times. By the end of the Middle Archaic (5500 B.P.), environmental conditions were much as they are today.

Early and Middle Archaic quarry sites investigated by Purdy revealed that during this time, quarry sites were heavily utilized not only for stone tool production, but also for other activities which required the use of stone implements. Purdy found at quarry sites a whole range of stone tools that had been utilised, suggesting the manufacture of, "...canoes, clubs,

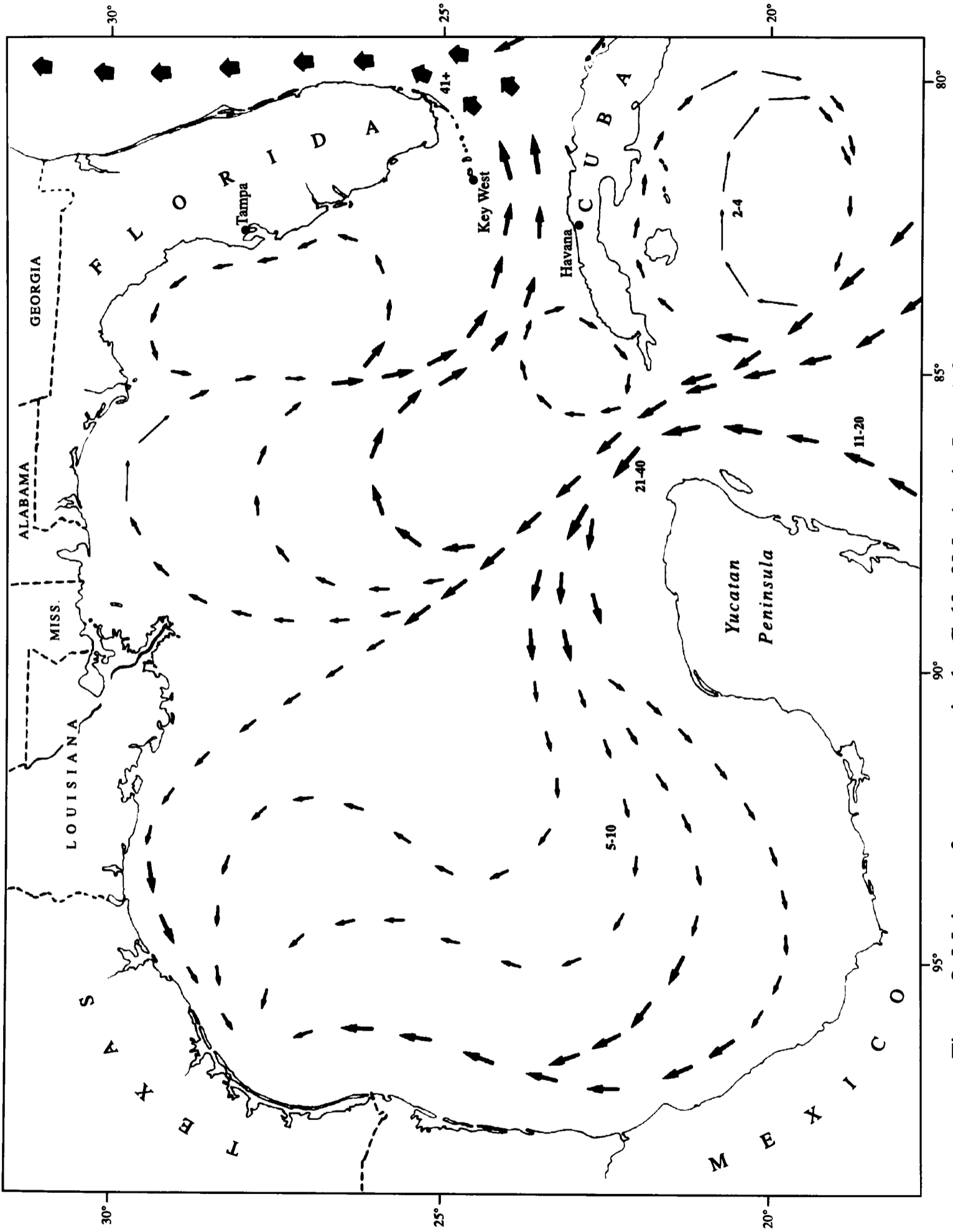


Figure 8. Major surface currents in the Gulf of Mexico in June (after Gore 1992:69)

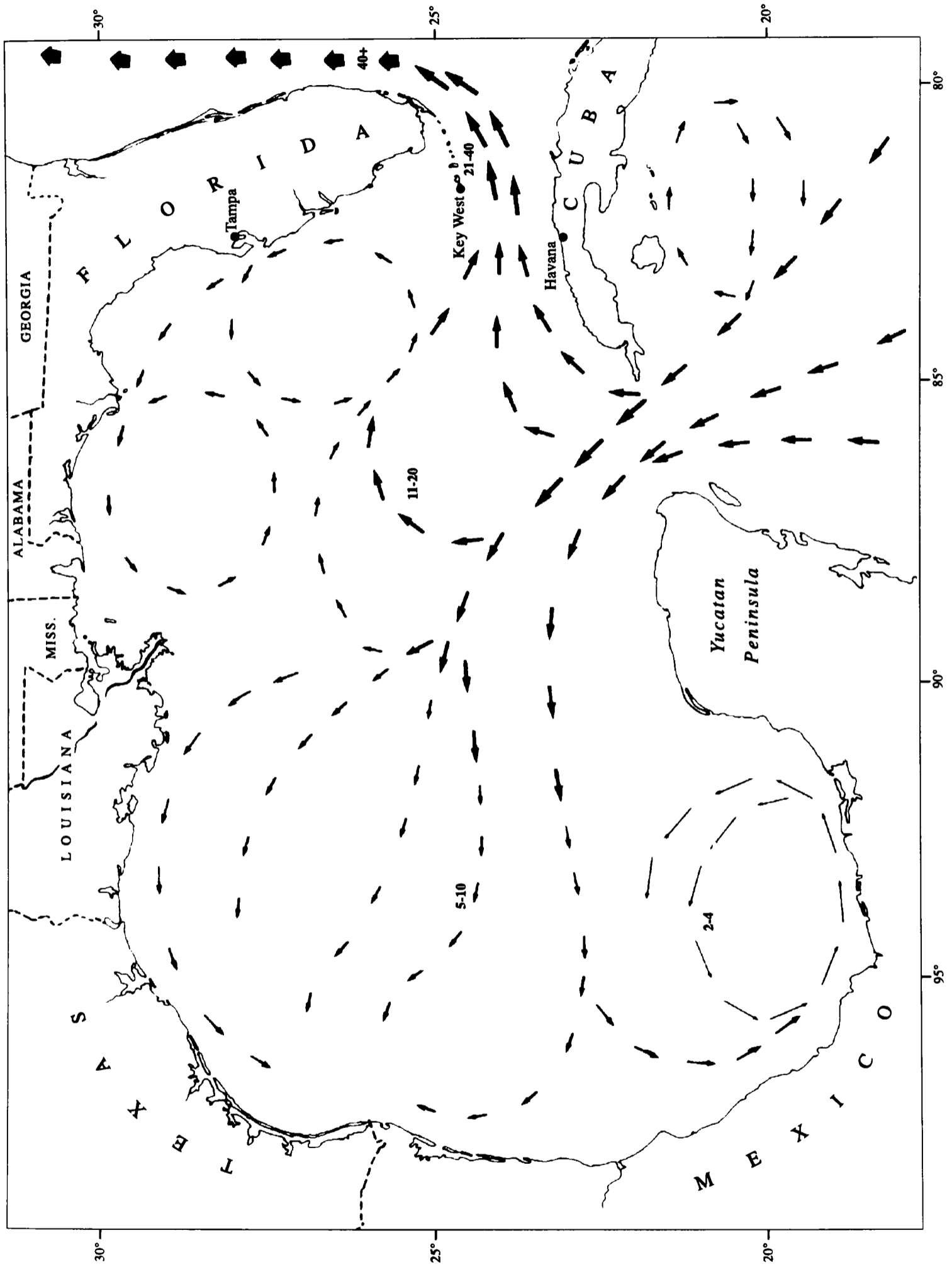


Figure 9. Major surface currents in the Gulf of Mexico in December (after Gore, 1992:70)

spear and arrow shafts, basketry, religious items, works of art, etc.” (Purdy 1996a:21). The most distinctive stone tool from this time period is the typical Archaic stemmed point (Purdy 1996a:21). In addition, Purdy points to excessive waste of the stone resource at these quarry sites as evidence that while it is generally believed that aboriginal populations conserve resources, that this is not necessarily the case (Purdy 1996a:21). The abundance of the lithic resource may be the critical factor which allowed the high rate of waste. Evidence of conservation occurs as the distance to the quarry sites increases.

Intensive sites of Middle Archaic occupation have been found in the interior of the state of Florida. In addition, freshwater riverine and coastal environments were utilised during the Middle Archaic. Typical of this period are stemmed, broad-bladed projectile points. Thermal alteration of lithic material comes into increasing usage during this period.

Pond cemeteries appear to have been utilised most heavily from about 6000 years B.C. to 4500-4000 years B.C. when this type of burial pattern appears to cease. As the Middle Archaic drew to a close, aboriginals became more and more efficient at exploiting the resources of Florida’s wetlands and shell tools begin to appear (Purdy 1996a:22-23).

Decorated bone pins presumably used in hair or clothing ornamentation are prevalent during the Middle Archaic throughout much of the Southeastern U.S. A study by Jeffries (1997) of the morphology and design of decorated bone pins from eight sites within the southern Midwest suggests an increasing regionalism in response to environmental changes. Increased sedentism and increased interaction between local groups grew and regional cultures emerged (Jeffries 1997). Decorated bone pins, some dating to the Middle Archaic

and earlier, have been discovered at the sites in Florida (Purdy 1996a:26-7; Purdy 1996b:13-29). The use of bone pines “...throughout the Archaic period in northern Florida and even later in South Florida” (Milanich 1980:54) may reflect an increase in cultural interaction by native Florida cultures.

Late Archaic (3500-2000 B.C.)

Circa 3000 B.C., at the same time the stabilization of the sea level resulted in the development of rich estuaries, there is an increase in the use of marine shell technology and coastal resources as well as elaborate designs on bone artefacts and there is also a possible change in burial patterns at the same time (Purdy 1996a:33).

Purdy states that,

Greater cultural complexity is evident in Florida by 4500 B.P. [2500 B.C.], but it is difficult to place emphasis on a single component, other than increased use of aquatic resources, to account for this complexity. It is possible that larger populations or external stimuli from neighboring cultures were prime movers for cultural change (Purdy 1996a:28).

During the Late Archaic, there is a shift away from the extensive use of stone quarries for the manufacture of stone tools to the increased development of shell tools. Evidently, this is a result of a change in focus from the interior to a more coastal lifeway which depended upon the recently established and prolific estuarine resources. Because the estuarine resources had become so plentiful, forays into the interior including to quarries would have been unnecessary for survival. And particularly in those coastal areas where chert outcroppings do not occur such as South Florida and the Southeastern Florida coast, shell tools were developed and functioned as adequate replacements for stone tools.

Marquardt has identified 51 different types of shell artifacts that were developed prehistorically in South Florida. From robust tools to delicate decorative beads, the extensive maritime adaptation that flourished there beginning in the Late Archaic is currently undergoing in-depth archaeological investigations (Marquardt 1992b:191-228).

Once established, this proliferation of shell tools is maintained through to historic times. In addition, bone continued to be fashioned as weapons, tools, and ornaments in tandem with these shell tools during the Late Archaic (Purdy 1996a:23-28).

Purdy states that,

As they learned to exploit these resources effectively through the development of new technologies or the application of old techniques to a new environment, they enjoyed a food supply as (or more) reliable than agriculture. This way of life persisted in most of Florida until the arrival of Europeans in the sixteenth century (1996a:27).

Ceramics are still absent in the Late Archaic, although clay “boiling” balls occur in Florida at this time. It is not until ca. 1300 B.C. that baked clay cooking balls are present at Poverty Point in the Mississippi Valley and ca. 500 B.C. before they occur elsewhere in the Mississippi Valley (Shaffer 1992:34).

In South Florida, the Archaic subsistence lifestyle persisted through to early contact at around A.D. 1500. Other localities such as the Panhandle region of Florida and other areas of the Southeastern U.S. adopted a Mississippian Tradition and came to rely heavily on maize agriculture by A.D. 1000. In contrast, the Calusa in many ways maintained an Archaic lifestyle that was well-established by the end of the Late Archaic ca. 2000 B.C.

Transitional Period 2000 B.C. -- 1200 B.C.

The Transitional Period from 2000 B.C. to 1200 B.C. heralds the introduction of pottery in the Southeastern U.S. Also during this period, a tradition of moundbuilding began in the Southeastern United States and prevailed through the Woodland and Mississippian Periods. In Florida, the development of large shell middens along the coast and in riverine settings began at this time.

The catalyst responsible for the development of pottery is a matter of speculation. The invention and adoption of pottery use in the Americas is not fully understood. Whilst the introduction of pottery use appears *not* to be related to sedentary agricultural activities, some feel that it *is* related to the "...enlargement of the array of foods more efficiently processed. And some foods were not able to be processed readily at all, prior to the advent of cooking pots" (Longacre 1995:279). The increased exploitation of the food resources in the environment which occurred during the Late Archaic would support this contention.

Whilst many feel that the necessity of pottery for use in cooking of foodstuffs led to the development of pottery use, there has been a recent challenge to that assumption:

The relationship of pottery to subsistence technology also has to be evaluated. Pottery may or may not be selected as a strategy for food processing and for intensification independent of resource change (Oyuela-Caycedo 1995:133).

Since humans have proved themselves wholly capable of cooking without the aid of pottery for thousands of years, Oyuela-Caycedo argues that the "pottery revolution" is an implausible model that envisions impacts of a large magnitude in conjunction with the introduction of pottery. Instead, "...pottery is just a tool that is invented or adopted to cope

with resource scarcity through social or economic means of intensification" (Oyuela-Caycedo 1995:135).

Data presented by Oyuela-Caycedo from an early site in northern Colombia includes fibre-tempered pottery and fire-cracked rocks used in cooking. Analysis of the distribution of the two materials across the site shows no direct statistical association between them. And Oyuela-Caycedo argues that "...pottery at this site had a function other than that of cooking" (Oyuela-Caycedo 1995:141). It is this type of analysis which archaeologists will need to pursue in order to further an understanding of early pottery use.

Additionally, the adoption of pottery may offer economic benefits, but existing social alliances may preclude acceptance of it as noted by Sassaman who explores the social disruptions inherent in the adoption of a new technology. Previous exchange relationships may bind a culture to traditional technology in order to maintain those relationships (Sassaman 1995:223-240). Resistance, then, to technological innovations such as the use of pottery may be rooted in prevailing social relationships.

The earliest pottery known to date in the Americas comes from South America. On the Eastern coast of South America, early pottery dates are reported by Anna Roosevelt (1995). Based on radiocarbon and thermoluminescence dating, Amazonian pottery was utilized approximately 7500 years ago during the Early Archaic. These early potteries from Amazonia include sand-, shell-, and spicule-tempered wares with sand-tempered pottery appearing to represent the earliest ware discovered to date. Because the Amazonian pottery is earlier than pottery reported in northern Colombia, Roosevelt feels that diffusion or

migration from Colombia cannot account for this early presence of pottery in Amazonia (Roosevelt 1995). This Eastern South American pottery predates Florida fibre-tempered pottery by thousands of years.

In South Florida, the beginnings of pottery use appear to have been accomplished without the development of agriculture. As Roosevelt (1995) suggests happened on the eastern coast of South America, aquatic resources provided the subsistence base necessary for a sedentary lifestyle and the subsequent use of pottery (Purdy 1996:36).

Fibre-tempered Pottery in Florida

The earliest type of pottery found in Florida is a thick fibre-tempered ware discovered along the Northeast coast. Whilst archaeological opinions differ over the idea of contact between Florida and Central and South America, Purdy points to fibre-tempered ceramics as an “obvious item for comparison” between American cultures (Purdy 1996a:29). She states that:

...if it were not for the parallelism noted in ceramics between northern South America and the coast of Georgia and Florida, other, perhaps older, evidence may have gone unobserved. Major questions to consider are: Is it only a coincidence that the earliest ceramics in North America appear first on the east coast of Georgia and Florida, that they are fiber-tempered, and that some of the designs on the pottery are similar to those from northern South America? (Purdy 1996:29).

One of the earliest comparisons of fibre-tempered ceramics between North and South Americas was undertaken by Ford (1966). In his study of early fibre-tempered ceramic traditions in northern Florida, Ford persuasively argues for some form of contact between northern Colombia and northeast Florida. Ford notes two theories in the development of

ceramic traditions in northeast Florida: 1) independent invention; or, 2) diffusion from other North American cultures. Because there are no comparable ceramics in contemporaneous North American cultures, either independent invention or the introduction of this ceramic tradition from other than North American cultures appear to be the only sources for the introduction of pottery in Florida. Because the first North American pottery occurs along the southern Georgia and northeast Florida coasts, Ford theorised that the spread of ceramics from the northern coast of South America to the Southeastern U.S. coast was the result of water travel (Ford 1966:782).

Figures 8 and 9 show the Gulf Stream surface currents and illustrate Ford's point regarding the spread of ceramics to Florida and Georgia's Atlantic coast. Surface currents generally converge and flow around the southern end of peninsular Florida, drawing water travellers to the east coast via the strong Gulf Stream current.

The earliest fibre-tempered pottery on the Northeast Florida coast dates to 2000 B.C. Radiocarbon dates at various Florida and Georgia archaeological sites firmly establish early plain fibre-tempered ceramics by approximately 2000 B.C. in Florida (Bullen 1961). By roughly 1600 B.C., decorated fibre-tempered wares appear in Florida and Georgia (Ford 1966). The earliest decorated fibre-tempered pottery from this area to 1600 B.C. and known as Tick Island Incised. At that time, there is no comparable ceramic tradition in North America. Orange Incised pottery of the northeast Florida coast is coeval with Tick Island Incised and eventually supersedes it, dating from approximately 1400-1100 B.C.

The introduction of pottery in Florida appears to occur in tandem with other new cultural

traits of the Transitional Period. Contemporaneously with the introduction of pottery are changes in lithic technology which occur during the Transitional Period. Purdy suggests that this new lithic technology may originate outside of Florida native cultures (Purdy 1996:31,33). Purdy states that, "...the constellation of new attributes may support the belief held by some individuals that pottery was not locally developed" (Purdy 1996:29). If the earliest use of ceramics in the Southeastern U.S. can be traced to external influences, the simultaneous introduction of new lithic technology from external sources might not be wholly unexpected.

During the Transitional Period, a moundbuilding tradition in the Southeastern U.S. was also established. Whilst this tradition is limited to the Lower Mississippi River Valley until ca. 700 B.C., it soon encompassed all of the Southeast.

A Moundbuilding Tradition

Originating in the Transitional Period and lasting over a period of nearly four thousand years, mound construction in North America ranged from the Great Lakes to the Gulf coast and from the Appalachian Mountains to the eastern Great Plains. The Mississippi River and its vast tributaries served to link an extensive exchange network that resulted in a geographically inward orientation for native cultures in the Southeast (Shaffer 1992:8,10).

While ancient earthworks may have served several purposes, including use as fortifications, they can be viewed as signifying political and economic network centres. These moundbuilding societies flourished for centuries and were involved in an exchange network that brought materials from as far away as the Rocky Mountains, the upper reaches of the

Mississippi River, the Great Lakes, the Ohio Valley, the Appalachians, and the Florida coast (Shaffer 1992: 4-5).

Despite the fact that a true moundbuilding tradition does not begin until the Transitional Period, the basis of the moundbuilding tradition is found in the new adaptations to the warmer, wetter post-palaeo environment which occurred at the onset of the Archaic -- increasing sedentism, regionalisation, and knowledge of local resources. A proliferation of tool types used for the exploitation of the local environment included the introduction of the atlatl and the first clear evidence of fishing apparatus in the Mississippi River Valley (Shaffer 1992:16-18).

By the Middle Archaic, a more sedentary living pattern had become prevalent by 4500 B.C., especially in river and stream valleys, their backwater lakes, marshes, and oxbows where fish and freshwater shellfish were abundant. The collection of shellfish and the disposal of shell remains amongst a variety of fish and mammal bones and other refuse resulted in shell mounds and shell middens. Partially due to their more sedentary lifestyle, the accumulation of refuse into middens which began during the Archaic are still visible today at many archaeological sites. These types of Archaic sites found along the Mississippi drainage are thousands of years earlier than those found along Florida waterways which probably reflects a fluctuating sea level until ca. 2500 B.C. Earlier Florida sites dating to this earlier time period may be inundated along the coast today (Shaffer 1992:19-20).

By the Late Archaic, a subsistence pattern based on productive water resources was established. Within the Mississippi drainage, sites along river and stream valleys were

inhabited for all but the winter season by ca. 1500 B.C. And, "... the region also witnessed the development of long-distance exchange networks, the formation of elites, the appearance of pottery, the beginning of horticulture, and a significant increase in population" (Shaffer 1992:21).

Long-distance trading included stone for tool manufacture, shells and mineral ores. At 3000 B.C., copper deposits in the Great Lakes area were beginning to be exploited as was galena (lead sulphide ore) which when ground into a powder was the basis of a silver white body paint (Shaffer 1992:21-2). Hematite, an iron oxide ore also known as red ochre, which was also ground into a powder for use as a red pigment was also a part of the trading networks that were beginning. This time period also marks the first evidence of elite burials exhibited with differential burial goods (Shaffer 1992:22).

Waterways were important due to the lack of domesticated animals in this part of the world that could be used as beasts of burden. Instead, canoe travel was crucial for transport of people and materials. The Mississippi drainage provided a complex web of waterways for canoe travel in all directions and served to link various regions that otherwise would remain isolated from one another (Shaffer 1992:26).

Plant domestication was also underway during this early period, although it is limited to the Mississippi drainage. An assumed incipient agriculture was transforming wild plants into domesticated forms. This incipient agriculture was not yet a food source upon which these people relied (Shaffer 1992:23-6).

One of the earliest sites containing earthworks is located on the Louisiana coast and has been tentatively dated at 2490 B.C. while late mounds date well into historic times and up to 1700 (Shaffer 1992:3). The earliest moundbuilding activity in Florida appears to be found in Southwest Florida at Horr's Island where purpose-built shell mounds date to ca. 3000 - 2000 B.C. or the Late Archaic (Russo 1991; Milanich 1994:102).

Poverty Point

It is during the Transitional Period that the earliest known evidence of moundbuilding activity occurred in the Eastern United States, lasting from ca. 1500-700 B.C. and roughly paralleling the Poverty Point Culture of the Southeast. Near the Louisiana coast ca. 2500 B.C., the earliest earthen mound in the Poverty Point Culture area was constructed. The Poverty Point site itself, located along the reaches of the Lower Mississippi River Valley, was at the focal point of this moundbuilding activity (see Figure 10) (Shaffer 1992: 28-9). By 1000 B.C., Poverty Point had reached its apex with possibly as many as 5000 people. Amongst the material culture of the Poverty Point culture were, "... clay cooking balls, clay figurines, small drill-like tools called microflints, plummet-like objects, and small, beautifully carved stone beads, figurines, and pendants" (Shaffer 1992:29).

Earthen mounds and concentric semi-circular embankments cover approximately three square miles at Poverty Point. Effigy mounds as well as conical mounds are also present. Over 100 sites along the lower Mississippi River are associated with the Poverty Point Culture area. Whilst generally clustered into ten areas, the larger sites are characterized by earthworks. Each area appears to exploit the same specific environment -- high ground within river and stream valleys which is surrounded by low-lying wetlands. No freshwater

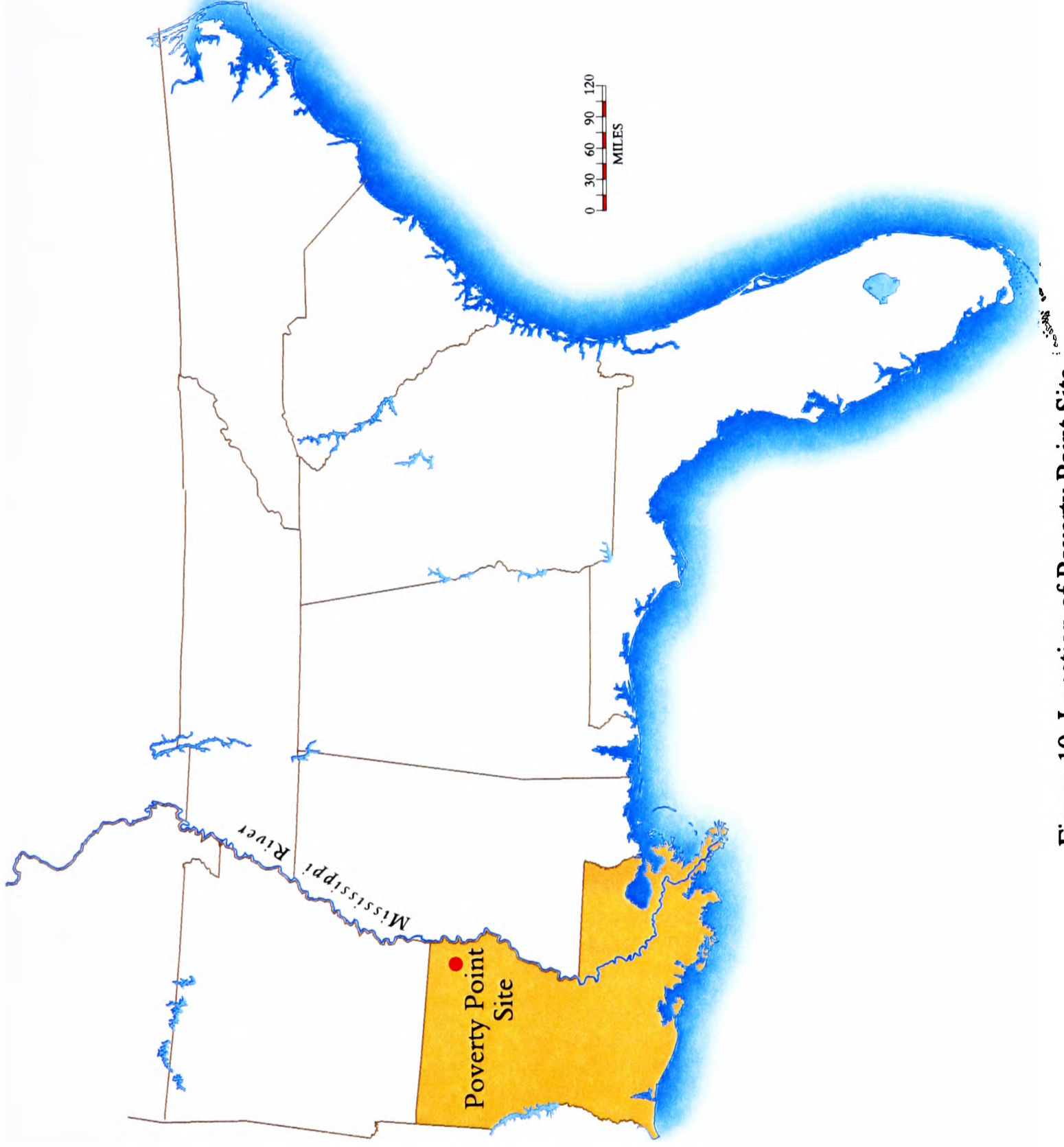


Figure 10. Location of Poverty Point Site

shell middens occur along the Mississippi drainage during this time period, although shell middens *are* found along coastal areas of the Southeastern U.S. (Shaffer 1992:29, 31-3).

Clay cooking balls have long been associated with the Poverty Point Culture and are believed to have been used in the cooking of food. The clay balls may have been used in the same manner as cooking stones by heating and placing them in a container with food (Shaffer 1992:34). In addition, spear point, atlatl weights, microflints, and hoes of stones are also characteristic of this culture. Pipes of stone and clay have also been found (Shaffer 1992:34-5).

Many of the most interesting objects made within the Poverty Point cultural area were for personal adornment or enjoyment, or for ceremonial use. Red jasper (a quartz) appears to have been the preferred material. Claw-shaped pendants and small owls were often made from it, and red jasper beads are also numerous... There are also small clay figurines which may be fertility symbols, since some of them appear to be pregnant women. Some researchers have suggested that the objects of personal adornment were marks of social distinction. If so, their presence in such large quantities at Poverty Point-related sites would indicate that there was more stratification within this area than elsewhere at the time (Shaffer 1992:35).

The vast trade network that brought stone, minerals, and probably other materials not preserved in the archaeological record from miles away may be the most distinct signature of the Poverty Point culture. Materials flowed to the Poverty Point area from the Great Lakes, the Ohio River Valley, the Tennessee River Valley, northern Georgia, southern Appalachia, the Upper Mississippi Valley, southern Missouri, the Ozarks and eastern Mississippi (Shaffer 1992:36). The waterways which flowed into the Mississippi provided a variety of pathways for hundreds of miles in all directions.

Poverty Point appears to have acted primarily as a clearinghouse with sole priority over

certain materials. Stone and clay goods from Poverty Point were exported eastward, reaching Florida's east coast. In Florida, clay balls are the most common Poverty Point cultural marker (Shaffer 1992:36-7).

The Elliott's Point Complex centred in Northwest Florida's Choctawhatchee Bay (see Figure 11) appears to be related to the Poverty Point culture and dates to the same time period. Clay cooking balls have been found as well as microlith perforators, stemmed projectile points, shell beads, bone pins and needles, steatite bowls and other steatite artefacts as well as fibre-tempered pottery. The Elliott's Point Complex represents a sedentary culture living off wetland resources in conjunction with hunting and gathering (Milanich 1994:95-100).

The recovery of a red jasper owl amulet from the Withlacoochee River (see Figure 11) also links that area of Florida's Gulf coast to the Poverty Point site. Analysis of this artefact has resulted in the conclusion that it originated from the actual Poverty Point site (Lien *et al* 1974). This appears to corroborate the participation by Florida native cultures at least peripherally in the Poverty Point culture of the Lower Mississippi River Valley.

The Poverty Point site remained an important and flourishing locale from 1000 B.C. to 700 B.C. when for unknown reasons, this earliest known moundbuilding tradition in the Southeast ended (Shaffer 1992:37). The conclusion of this moundbuilding tradition occurs as the Formative Period has already begun.

Formative Period 1200 B.C. -- A.D. 1000

At the beginning of the Formative Period, northern states start using pottery, although this



Figure 11. Elliott's Point Complex and Location of Red Jasper Owl Amulet

pottery was rarely fibre-tempered. This introduction of pottery to the northern states signals the beginning of the Woodland period and follows the use of steatite (soapstone) in those areas for the production of vessels.

In Florida, fibre-tempered pottery begins to decline in favour of the use of sand, sponge spicules, and grog or crushed ceramic fragment for tempering. Coiling in the manufacture of pottery becomes more and more common until it becomes standard, and Purdy notes that, “New vessel shapes and styles appear and some of these may have been introduced from outside Florida” (1996a:35). Bottle gourds and ornamental gourds occur in the archaeological record at this time, but were probably used as containers rather than sources of food, and may have occurred naturally rather than as a result of cultivation (Purdy 1996a:36).

During this time, the water of the Gulf of Mexico continued to provide a simple and effective means of transportation for those living on its shores. In particular, the Gulf itself links lands in Central and South America to North America. Large riverine systems such as the Mississippi River provide additional transportation to the interior. Although still the subject of much debate, this series of transportation networks appears to have allowed the transmission of cultural traits from Central America to the Mississippi Valley which eventually reached Florida’s Gulf coast (Purdy 1996a:36).

The Adena and Hopewell cultures illustrate the re-emergence of the moundbuilding tradition in the Southeastern U.S. Ranging from ca. 500 B.C. to A.D. 400, these cultures appear to be highly representative of the patterns of behaviour that occur during the Formative Period.

Located along the Ohio River and its tributaries, the Adena-Hopewell Moundbuilding tradition renewed the construction of earthworks ca. 500 B.C. Fuelled by the Adena culture which began ca. 500 B.C., the Hopewell Culture continued this moundbuilding tradition from 200 B.C. to A.D. 400 and also included the cultivation of corn. It is believed that the Hopewell culture integrated the trade networks that began during the earlier moundbuilding epoch. This integration resulted in a broad uniformity within the entire moundbuilding region (Shaffer 1992:38).

Regarding the earthworks produced during this period, Shaffer writes that:

Many sites are marked by elaborate geometric designs combining hexagons, circles, squares, and rectangles; others, especially those in Wisconsin and its vicinity, are marked by effigy mounds (1992:38).

The material culture of this time period displays an especially high level of craftsmanship (Shaffer 1992:38).

Adena Culture

The Adena culture flourished in Southern Ohio and is characterized by effigy mounds such as the well-known Serpent Mound and stone platform pipes which were manufactured from stone found in southern Ohio outcroppings (Shaffer 1992:40). During this time period, the earliest pottery found along the Central Mississippi Valley is sophisticated and appears to have been imported from the Tennessee River Valley. The importing of pottery from the Southeast continues throughout both the Adena and Hopewell cultures (Shaffer 1992:39-40).

Hopewell Culture

Overlapping the Adena culture is the Hopewell culture which appears to have emerged from the Adena, although influences from Southern Illinois may have been the catalyst for Hopewell development. The advent of the Hopewell Culture brought with it an integrated regionwide exchange network. There was an increased distribution of long-distance trade items that results in a rather uniform material culture throughout the region. Freshwater pearls, marine shells, various ores, high-quality chert, obsidian, mica, and other highly prized materials are found in great abundance throughout the region during this period. Shaffer maintains that an increase in the efficiency of long-distance trade resulted from the use of locales positioned between important resources. Acting as a middleman between the two resource sites, the intermediate locale seeks to distribute the resources under its control (Shaffer 1992:41-7).

The Hopewellian Culture is also characterized by the presence of corn. Because it was grown only in small amounts, corn was not a dietary staple but may have instead served a more specific and possibly ceremonial purpose. The end of the Hopewell culture ca. A.D. 400 also resulted in the disappearance of corn cultivation in the region. Overall, hunting, gathering, and fishing provided the main sources of food. Agricultural activities are present on a small scale (Shaffer 1992:46).

Burial mounds are more prevalent during this second moundbuilding period. Included within these mounds are elite burials containing exotic raw materials as well as expertly finished goods -- many times in large quantities (Shaffer 1992:47).

By 200 B.C., sites throughout the moundbuilding region display clear

evidence that something more than highly valued strategic goods and ceremonial objects were being exchanged. Clearly there was also an exchange of ideas, a cultural dialogue of considerable proportions. Since the mounds were designed in similar ways, and more or less the same materials and goods are found in all parts of the region, and these goods appear to have been used in more or less the same ways and within the same context, archaeologists believe that after 200 B.C., all parts of the moundbuilding region participated in similar ceremonies and endowed certain objects and rituals with similar symbolic meaning. To various degrees, they all shared a similar world view (Shaffer 1992:47).

This saturation of the moundbuilding region with a specific world view fuelled the demand for long-distance trade items (Shaffer 1992:47-8). The Hopewell culture, though, began to decline between A.D. 300 and 400, resulting in a reduction in moundbuilding and long-distance exchange. By A.D. 550, the Hopewell culture no longer existed. The decline of this culture is not well understood.

Florida Cultural Patterns during the Formative Period (1200 B.C. -- A.D. 1000)

During this time period in South Florida, the beginning of the construction of mounds appears to develop. As early as 1000 B.C. in South Florida, large, impressive earthworks were constructed in the Lake Okeechobee and Kissimmee River regions (Johnson 1996:249). In South Florida between approximately A.D. 200 to A.D. 600 or 800, earthworks including mounds are also associated with exotic trade items common to Southeastern U.S. cultures (Milanich 1994:293-7).

Regional differences begin to appear by the end of the Formative Period. These regional differences have been used by archaeologists in order to develop the concept of culture areas within Florida. These culture areas have been developed based on the grouping of similar traits (Purdy 1996:37). As a result, three broad regional adaptations have been identified at

the end of the Formative Period which are discernable in the archaeological record, including the Gulf Coast Deptford culture, St. Johns culture in the Northeast, and the South Florida culture. Maintaining a focus in South Florida, this time period results in,

...the introduction of black earth middens, the construction of circular drainage ditches, plain sand-tempered pottery (also known as Glades I), nonlocal materials such as mica, steatite, marine shell, and chert, although this latter material appears at earlier sites also. Primary and secondary burials contain few grave goods. Many types of animals were utilized. Practically nothing is known about plant remains from this time. South Florida, according to some authors, was a cultural cul-de-sac (Willey 1949a). It may have received influences from Middle and South America and it interacted with cultures on the Gulf Coast and along the St. Johns River. There is also strong evidence that it may have affected and been affected by Hopewellian cultures as far away as the Ohio Valley (Purdy 1996a:45).

Mississippian Period

It is just prior to and during the Mississippian Period (A.D. 1000-1731) that the site of Cahokia developed, reaching its peak between A.D. 900 and 1250. Cahokia's largest mound is also the world's largest earthwork and the site containing it covers 5.8 square miles (see Figure 12). This final epoch of moundbuilding in the Southeast continued through European contact in some locations of the Southeastern U.S. (Shaffer 1992:51).

Platform mounds are characteristic of the Mississippian Period. A platform mound is composed of a rectangular base with a truncated top. The truncated upper level was used as a platform for a structure of social importance. Platform mounds appear first in Southwest Georgia and Central Florida at ca. A.D. 500 and then spread by A.D. 700 to the Mississippi Valley. European chroniclers discovered and described paramount chiefs in the Southeast living in large structures atop platform mounds (Shaffer 1992:52).

Such platform mounds usually faced a large plaza, and smaller mounds were arranged around it. Many of the latter were conical in shape.



Figure 12. Location of Cahokia Site

Others were rectangular at the base, tapering off to a ridge at the top, rather like a loaf of bread. Platform mounds contain few burials. They were built in many stages, and it appears that whenever a ruler died, his palace on the mound was destroyed, and a new layer of earth was added. The new ruler's palace was then constructed atop the mound. Elite burials are most often found in the conical or ridge-topped mounds. This suggests that the height of a palace mound was a good measure of how long the chief's lineage had been paramount and that the number of conical and ridge-topped mounds indicated the number of lineages that had allied with the paramount chief (Shaffer 1992:52-3).

Cahokia, the largest Mississippian centre, enjoyed a strategic location for both north-south and east-west trade. Because Cahokia is located just east of the Mississippi River, trade routes along the Mississippi and its major tributaries had fast and easy access to this major centre (Shaffer 1992:60-1). Exotic materials introduced from long-distance trade were heavily utilized as they were earlier during the Hopewell Period, although closer sources for some materials began to be exploited (Shaffer 1992:57-8). Chunkey stones appear for the first time during the Mississippian Period (Shaffer 1992:58).

Due to its location along the Mississippi, Cahokia also benefited from excellent agricultural soils. Between A.D. 800 and 1000, the people living in the Mississippi Valley became dependent upon corn as a mainstay in their diet. Both beans and corn were cultivated during this period, using strains introduced from Mexico. As a result, salt also became an important exchange item (Shaffer 1992:56-7).

River valleys during the Mississippian Period were heavily populated with villages and towns. This proliferation of congregated living may reflect the new dependence upon agriculture which, while allowing a higher population density, creates a reduced standard of nutrition (Shaffer 1992:58-9).

Craft specialization is a hallmark of the Mississippian Period. Exotic materials were fashioned by specialists into adornments, ceremonial objects, and tools while some of the population remained occupied with farming, fishing, and hunting activities (Shaffer 1992:54).

A 410-foot diameter circle of 48 large wooden posts found at the Cahokia site is thought to have marked astronomical events such as equinoxes and solstices (Shaffer 1992:54). Precise calendrical data may have been necessary for rituals and/or seasonal activities, possibly reflecting the growing importance of agriculture and its relationship to growing seasons.

The human hand, snakes, and birds continue to be popular motifs during the Mississippian Period. The depiction of a dancer in a bird costume is a design typically associated with the Mississippian Period. This design is found throughout the Southeastern U.S. and is also typical of the Southeastern Ceremonial Cult (SECC) which occurs ca. A.D. 1250 ± 100 in portions of the Southeast and will be discussed in more detail below.

Some of the designs from the third epoch [of moundbuilding] appear to be cosmographic symbols. Circles with crosses inside them were common, and often some motif -- a geometric design such as a cross or a realistic image such as a frontal view of a hunter's face or a side view of a bird's beak -- would be repeated within the circle four times, indicating the cardinal direction laid upon the earth... Some of the circles have a zigzag design around them and thus appear to represent the sun as well as the earthly realm. The sun and human eyeball seem to have been closely associated in the symbolic world of the Mississippians (Shaffer 1992:55).

Burials at Mississippian Period centres suggest social stratification due to differential burial goods. Paramount rulers and three different classes of people are recorded by early European explorers who encountered Mississippian societies in the Southeastern U.S. The

paramount rulers lived in relative luxury and were known as Great Suns. Notables, principal men, and commoners comprised the remaining three classes in this four-tier system (Shaffer 1992:62-7).

The paramount ruler was expected to perform all the necessary sacred rituals to insure the prosperity of the community. In return, tribute was submitted to the paramount ruler who was also required to redistribute such tribute to his or her subjects (Shaffer 1992:66). The practise of human sacrifice is first known in the Southeastern U.S. during the Mississippian Period.

. . . Mississippian societies engaged in human sacrifice when a ruler or high-ranking noble died. There is no evidence of such a practice in earlier moundbuilding epochs. It seems to have begun at Kolomoki (in Georgia), which was also an early site of the platform mound (Shaffer 1992:66)

Ceremonial displays of paramount power occurred within Mississippian societies (Shaffer 1992:67). Political actions were sophisticated and shrewd. De Soto's military entrada, for example, threatened the safety of native cultures. Village chiefs repeatedly offered De Soto female kin as wives to create an alliance between the two cultures (Shaffer 1992:68). This use of a marriage to seal an alliance between two social groups was also used by the Calusa during their first official contact with the Spaniards in 1566 when Carlos gave his sister, Doña Antonia, as a wife to Pedro Menéndez de Avilés (discussed further in Chapter 7. "Postcontact Impacts -- Official Contact").

Florida Mississippian Subregion

The Mississippian tradition is generally recognized in six subregions of the Southeast (see Figure 13). An additional subregion comprised of Florida is also considered by Shaffer

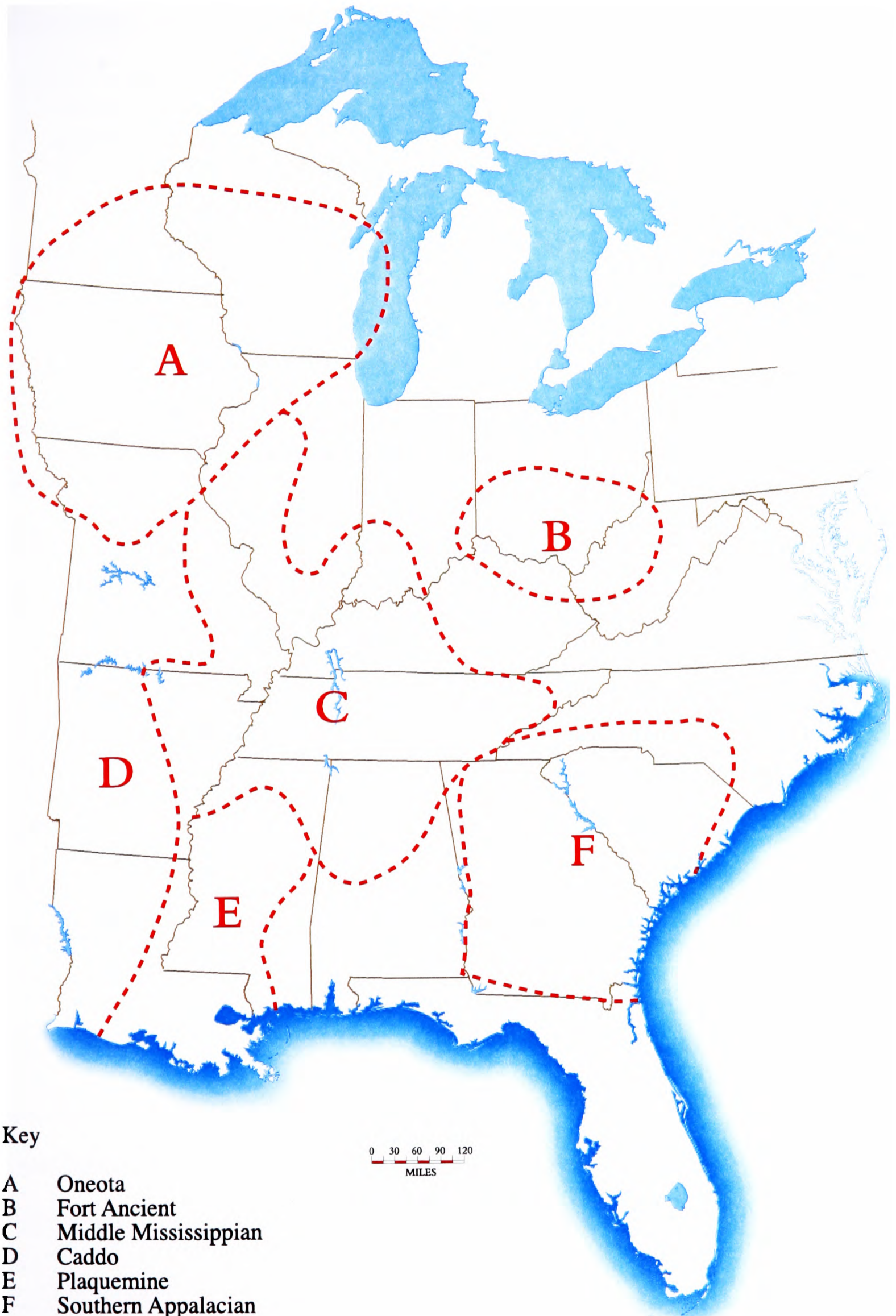


Figure 13. Six Mississippian Subregions in the Southeastern U.S. (from Griffin 1967: Figure 5)

who states that:

The centers of these subregional cultures participated at some level in Mississippian ceremonial, and while they did so, they were also able to bring about an unprecedented degree of consolidation and cultural continuity within their own locales (Shaffer 1992:73).

It is believed that the overall powerful status of Cahokia resulted from its location with access to scarce or exotic resources. The Mississippian cultural subregions are believed to have become powerful due to their control over regionally scarce resources present within their subregion and in demand from Cahokia (Shaffer 1992:78). South Florida probably interacted in a more or less continuous basis with the Southern Appalachian subregion which reached to the edge of North Florida. The Apalachicola River probably served as a travel route connecting Southern Appalachia with North Florida (see Figure 14).

Corn production, flat-topped temple mounds and a ceremonial complex known as the Buzzard Cult or the Southern Cult or the Southeastern Ceremonial Complex (SECC) were accompanied by the introduction of the small triangular Pinellas stone point which is thought to occur along with the introduction of the use of bow and arrow (Milanich and Fairbanks 1980:100). These are all traits associated with the Mississippian Period.

In South Florida, Late Archaic cultural traits continued through to the protohistoric period. Agriculture during this time period was not practised in South Florida, despite the fact that North Florida cultures adopted corn cultivation during this time, if not before. In addition, North Florida cultures appear to reflect closer Mississippian ties than does South Florida.

Subsistence based primarily on the wide availability of estuarine resources along the coast



Figure 14. Possible Hopewell Trade Route Along Apalachicola River

seems to be one of the major long-term patterns of South Florida. Coupled with this is the continued use of shell for tools. Influences from the Mississippian culture do appear to be reflected in some aspects of South Florida material culture. It is this South Florida Culture to which the Calusa belong.

Southeastern Ceremonial Complex (SECC) A.D. 1250 ± 100

The Southeastern Ceremonial Complex (SECC) appears to have blossomed within the Mississippian Tradition. Whilst maintaining Mississippian characteristics such as the use of temple mounds, new themes arose within a more limited geographical area. In Florida, traces of the SECC can be found.

The SECC represents "...a complicated phenomenon that was partly religious, partly economic, and partly a system of exchange" (Muller 1989:11). Usually described in terms of specific themes, it is important to note that these themes are really an on-going tradition of development within the Southeastern U.S. rather than a sudden intrusive set of motifs and themes. By A.D. 900 - 1150, the developing Mississippian Period included trade for long-distance exotic materials and the manufacture of finished products for trade and from A.D. 1250 ± 100 the full development of the SECC (Muller 1989:13-15).

The unifying characteristics that suggest a related complex includes the use of raw materials from distant locales and the use of common motifs. Generally, the material culture of the SECC is characterized by art motifs of bi-lobed arrows, striped pole, baton/mace, fringed apron, ogee, chunky player, raccoon hindquarters, and bellow-shaped apron. Heightened exchange and a complex of shared motifs, themes, and finished goods distinguish this full-

blown expression of the SECC from earlier and later periods (Muller:1989:11-12, 15).

From A.D. 1315± 100, Muller notes that:

...striking long-distance exchange of 'valuables' seems to have almost ceased after the beginning of the fourteenth century. The decline in the exchange of such goods corresponds temporally with the virtual, if not the complete, abandonment of the more northern Mississippian centers (1989:16).

Reduced exchange is replaced by localized development or expression of the SECC.

Independent regional traditions begin to appear (Muller 1989:16-17). As Muller points out:

Only a few artistic motifs that are distinctively 'Southern Cult' [SECC] tie these regions together. Although artistic materials across the East have other similarities, most of the similarities are features that had been part of the general eastern repertoire for more than a thousand years by the time of the Southern Cult. This means that a very good argument can be made for the cultural closeness of all of the East during the late prehistoric period, but this is what makes the Cult possible, not something that is a *result* of any Southern Cult system (1989:19).

Three archaeological sites renowned as centres of the SECC include Etowah in Georgia, Moundville in Alabama, and Spiro in Oklahoma. Each of these sites has yielded a great amount of material culture which in some ways exemplify the SECC (Muller 1989:19). Use of these artefacts within a social context is debated, although most believe that they were representative of status or rank and were utilized in effect to support chiefly rule, particularly in areas where agriculture had taken a precedence in subsistence (Muller 1989:26).

Technological innovations are limited to the introduction of a small Mississippian stone point that is common in Southeastern Mississippian sites. Coastal items such as marine shell and shark teeth are found inland, which indicates continued trade between inland and coastal peoples.

Expression of the SECC throughout Florida varies greatly. One Northwestern Florida culture, Fort Walton, was fully Mississippian, including the cultivation of maize as a subsistence base. Located along the Apalachicola drainage and eastward to the Tallahassee area was the fully-Mississippian Fort Walton culture. The Fort Walton culture was dependent upon maize agriculture and developed a hierarchical society which most feel was necessary in order to control the distribution of food to an ever-increasing population. Agricultural and community pursuits were carried out by commoners while elites enjoyed high status and an impressive array of goods fashioned from exotic materials. Elites lived atop pyramid-shaped truncated temple mounds.

Milanich states that:

The most politically complex culture in Florida and the regional culture with the densest population was Fort Walton in the northwest region of the state (Milanich 1994:355).

Inland sites are more common to the Fort Walton culture and probably reflect the agricultural orientation of this society; coastal lands in this area are unsuitable for agricultural pursuits. Maize and beans were cultivated. Cleared-field row agriculture is thought to have been used.

Copper and shell artifacts resembling those found at the SECC centres have been recovered from the Lake Jackson site near Tallahassee in North Florida. This site appears to have been a fairly large ceremonial centre with several mounds and a constellation of smaller, related sites. Elite burials at this site included huge amounts of paraphernalia linked to both their status and the SECC as an institution.

Traits of the SECC present within the Fort Walton culture include greater reliance on agriculture as a subsistence base, the construction and use of mounds, the development of a highly ritualized and hierarchical society, the extensive use of goods fashioned from exotic materials to portray status, the frequent use of SECC motifs, and the great degree of power afforded to elites who were responsible for success (Milanich 1989:355-380).

The Fort Walton culture no doubt continued to benefit from the trade route believed to have been established by Hopewell times which moved items and ideas up and down the Apalachicola River. Elsewhere in Florida and including South Florida, little participation is evident during the zenith of the SECC in the Southeastern U.S. These native Florida cultures were not bound to an agricultural subsistence base, and they appear to be only minimally involved with the otherwise pervasive cultural phenomenon of the SECC. Other cultures in North Florida flourished during this time period, but cannot be considered full participants of the SECC as Mississippian cultures did. Many archaeologists believe that this differential participation can be explained by the divergent subsistence practices. Fully-participating SECC cultures were agriculturally-oriented and depended on cultivation for survival. Whilst some features of the SECC appear at various sites in Florida, they seem to reflect the adoption of specific cultural characteristics, but not wholesale acceptance of the SECC.

South Florida SECC

In South Florida, evidence suggests nominal participation in the SECC. Some cultural characteristics appear to be inspired by the SECC, but there is clearly no wholesale adoption of this phenomenon. Because the Fort Walton culture of North Florida exhibits a much

higher degree of participation in the SECC, these differences in investment are believed to be rooted in the varying economies of North and South Florida. The North Florida dependence upon agriculture led to the development of a culture heavily invested in the SECC. South Florida cultures, in contrast, relied on the natural abundance of their environment for subsistence, and chose to adapt SECC concepts to their existing cultural construct (Widmer 1989).

The Black Drink Ceremony and the presence of temple mounds in South Florida represent commonalities found among SECC participants (Widmer 1989). South Florida metal tablets and metal crested-bird ornaments are thought to be SECC-inspired (these topics are further discussed in Chapter 4).

Widmer states that:

What we see, then, is a continual interaction and interconnectedness through time, and therefore free access to the various religious and ceremonial motifs found in the core Southeast, during both Hopewellian and later times, by groups in south Florida. We do not see a grafting on or incorporation of all motifs and traits into this geographically circumscribed and delineated ceremonial complex that in south Florida was prominently developed by Hopewellian times. In post-Hopewellian times, this complex maintained a religious continuity in terms of the number of deities, mostly animals, yet now incorporated only certain motifs characteristic of the Southeastern Ceremonial Complex iconography and used none of its themes (Widmer 1989:174).

Widmer points to functional aspects for the peripheral participation of the South Florida cultures in the SECC and which he terms the “South Florida Ceremonial Complex”:

The primary function of the South Florida Ceremonial Complex is in many ways similar to that hypothesized for the Mississippian area, namely the maintenance of the viability of the subsistence base through religious ceremony (Widmer 1989:177).

Widmer (1989) believes that the development of chiefdoms in South Florida gave rise to the South Florida Ceremonial Complex which acted to reinforce chiefly status. The basis for this complex began during the Late Archaic and allowed for the opportunity to borrow motifs from the SECC during its late prehistoric florescence.

At the time of official European Contact, Calusa characteristics appear to reflect the SECC, particularly the Black Drink Ceremony, temple mounds, the use of metal tablets and the use of the crested-bird motif. These features appear to be important aspects of the Calusa culture as we know it today which are also linked to the SECC. For the Calusa, using the ideology that was supported throughout the Southeastern U.S. would have augmented an already powerful chiefly system.

In addition to SECC motifs and ideology, the Calusa culture at Contact exhibited a variety of traits which illustrate its roots in the Late Archaic. This is the Calusa culture as it is described by the Spanish in the mid-16th century.

1. The reference for Cavallis-Sforza *et al.* 1988 is unavailable in Doran's 1992 article and therefore does not appear within the Subsidiary Bibliography found at the end of this document.

CHAPTER 4. FLORESCENCE OF CALUSA CULTURE IN TIME AND SPACE

The prehistoric archaeological record in Florida reveals patterns of behaviour which show continuity through time. Coastal sedentism increases and differences in status begin to intensify. The Formative Period witnessed a variety of innovations. The introduction of ceramics and increased sedentism are two important markers of this time.

It is during this period that the Calusa culture is thought to have been established. By the Formative Period, Florida Native American cultures are moving from the use of fibre-tempered pottery to the use of sand, sponge spicules, and grog or crushed ceramic fragments for ceramic tempering.

Archaeologists believe that the Calusa culture was established by 500 B.C. Sedentary settlement along the Southwest Florida coast began to intensify and signs of status became evident in differential mortuary effects. During the next 2000 years, the Calusa culture developed and flourished.

In South Florida, increasing coastal sedentism is reflected in the steady accumulation of shell middens during this time period. At the same time, there is no evidence of the use of agriculture in South Florida. This increasing sedentism may reflect the abundance of available resources within the coastal environment. It is important to note that in North Florida as well as other parts of the Southeastern U.S., agriculture began to play an increasingly important role in the subsistence capabilities of the people living there at the end of the Formative Period.

The purposeful construction of earthen and shell mounds also occurs in South Florida during the Formative Period(1200 B.C -- A.D. 1000). Burial mounds and temple mounds are present. During this time, other items of material culture include the highly developed use of shell for tools and ornaments in South Florida. The presence of exotic materials from distant sources also increase in frequency.

Our knowledge of the Calusa culture is skewed towards the historic period when European accounts began a written record of the Calusa. Written accounts of the Calusa by Europeans at the time of official Contact are a boon to researchers, but also present problems in interpretation. These written accounts necessarily reflect a Calusa culture which has already been exposed to European culture; it is still unclear if the extraordinarily powerful Calusa culture developed entirely apart from European influences.

Does a Calusa culture reported by the Spanish reflect a Native American culture following an already established trajectory of cultural development? Or does it represent merely the shadow of a Native American culture which has been greatly disrupted by European cultural impacts? Perhaps the Calusa culture recorded by the Spanish lies somewhere between these two extremes. Whilst we are currently unable to definitively answer these questions, archaeological research and written records provide some insights into the Calusa culture which was visited by the Spanish 2000 years after its emergence in prehistory.

Despite obvious changes to Calusa material culture as a result of introduced European material culture, the Calusa culture described by the Spanish retains features rooted in prehistory. This chapter focuses on cultural characteristics associated with the Calusa

culture through time. Due to the benefits derived from historical documents and the apparent florescence of the Calusa culture in the early post-Contact era, our clearest portrait of the Calusa is what was probably their most powerful and influential.

The Floridian physiographic section which includes all of Florida is a young marine plain, with sand hills, swamps, sinks, and lakes (Fenneman in Swanton 1987:2). The Calusa “Heartland” and the surrounding area consist of several different specific physiographic features (see Figure 15). The Southwestern Slope dominates the southern coastal area, gently sloping downwards from east to west. The Gulf Coastal Lagoon and Gulf Barrier Chain features cover all of the Calusa “Heartland” along the coast of the Gulf of Mexico. The Caloosahatchee Valley follows the path of the Caloosahatchee River and is considered a low-lying area which terminates at Lake Okeechobee on the east. To the west of the Caloosahatchee Valley is the Gulf Coastal Lowlands which are found north of Charlotte Harbor (Wedderburn *et al.* 1982:18-20).

As shown in Figure 16, the ecosystems of Southwest Florida Gulf coast consist of *sandy flatlands* and *coastal mangrove zone*. The coastal mangrove zone is characterized as an estuarine environment which serves as a vast fish nursery and shellfish feeding ground.

Large geographical features which dominate Southwest Florida are the Big Cypress Swamp and the Everglades are located inland of the Gulf coast. Hammocks of higher elevation within the Big Cypress Swamp and the Everglades range from a few acres to several hundred acres in size. These hammocks provide an alternative ecosystem to the swamps and can support slash pine, palmetto, oak and other plant life which cannot survive within a

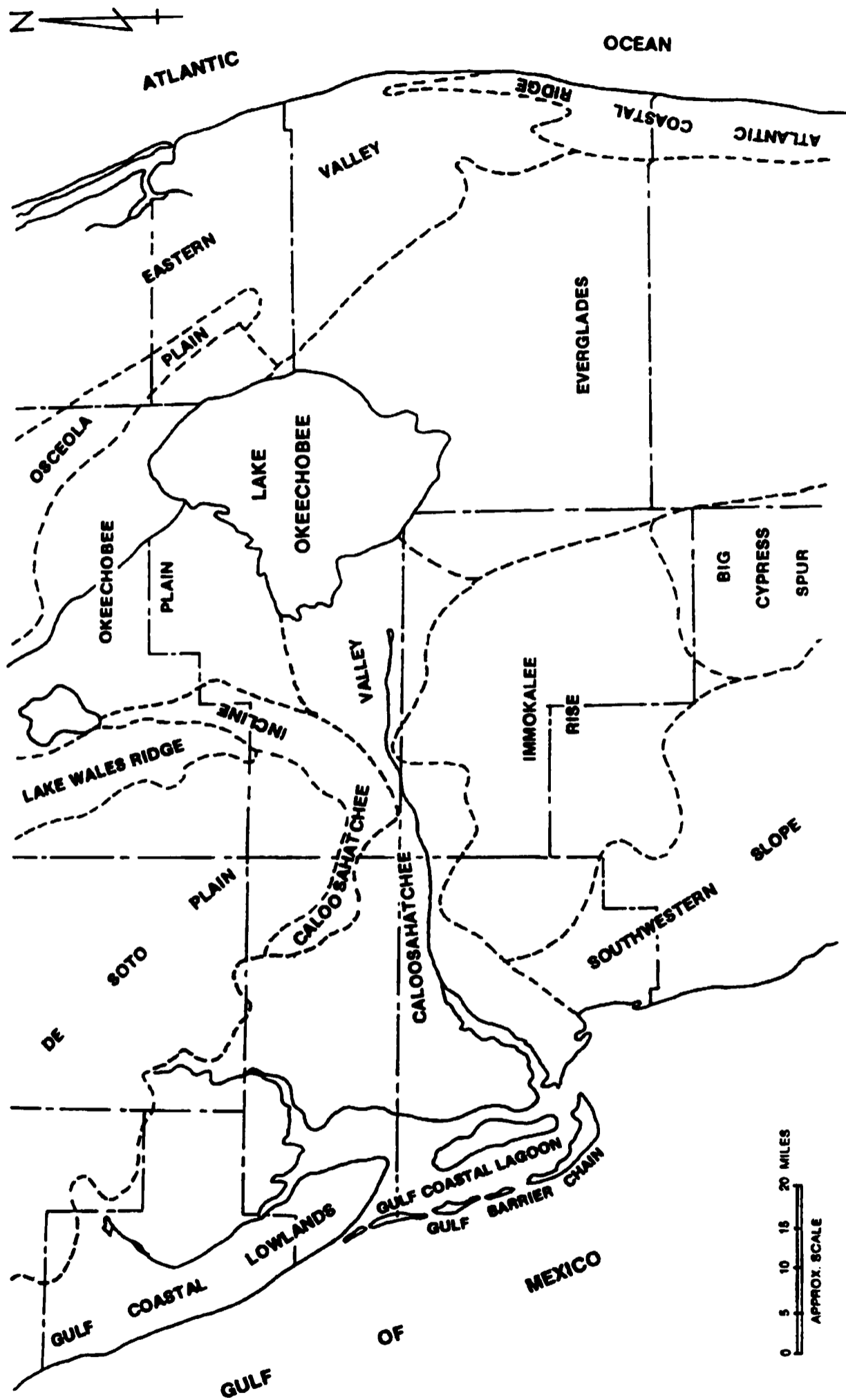


Figure 15. Physiographic Features of South Central Florida (from Wedderburn et. al. 1982: Figure 2)

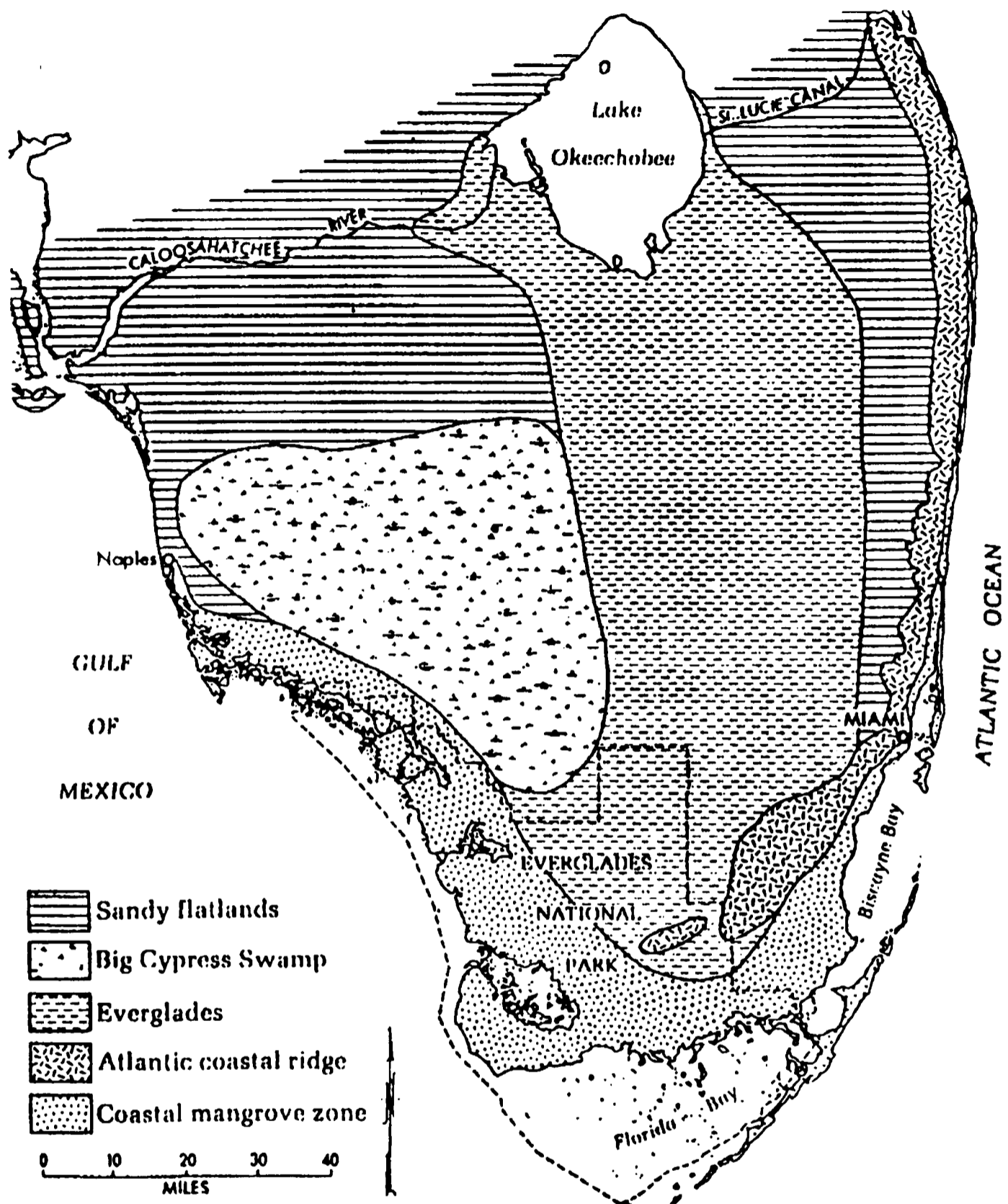


Figure 16. Ecological Zones of South Florida Prior to Development
(from Carter 1974: Figure 1.7)

constantly inundated environment. Prior to contemporary drainage efforts, the Everglades water levels were several feet higher than they are today. With higher water levels in early historic times, access to the Everglades was by canoe (Carter 1974:16-21).

The Caloosahatchee River¹ provides an additional environmental feature along with other smaller rivers which empty into the Gulf. The freshwater from these riverine sources creates a brackish environment where it enters the protected embayments of the Southwest Florida Gulf coastal waters, resulting in an ideal estuarine environment. Rivers also provide freshwater flora, fauna, and easy access to the interior.

Geologically, the Southwest Florida coast's barrier-inlet system is a part of the West-Central Barrier System which stretches from Tampa Bay to the north to Marco Island (Key Marco) to the south (Davis 1997:162). It is subject to impacts from tidal and wave action and the morphology of these barrier island is greatly affected by minor changes in these two forces (Davis 1994 in Davis 1997:163).

The southernmost third of peninsular Florida falls within a tropical area and including the Calusa "Heartland" (Swanton 1987:9). In general, the Southwest Florida coast is plagued by poorly drained soils. The coastal area where the bulk of Calusa archaeological sites have been discovered is low-lying and subject to Gulf influences. Inland areas are characterized by flatwoods, swamps and sloughs.

The sands of Southwest Florida's beaches are comprised of both quartz and calcium carbonate shell (Johnson and Barbour 1990:429). These sands support a variety of native

vegetation which occur on the upper beach and foredunes, transitional zone, and stable dunes found on Southwest Florida's Gulf coast and barrier islands. Sea oats, sea purslane, beach dropseed and the western beach sunflower populate the upper beach and foredunes. Typical West Indian coastal shrubs including nickerbean, sea grape, bay cedar, coin vine, other shrubs and small trees and grasses and forbs comprise the bulk of transitional zone vegetation. Cabbage palms, predominate in the area of stable dunes (Johnson and Barbour 1990:450-455). Additionally:

Shell mounds or shelly storm ridges may support a tropical hammock of gumbo limbo, strangler fig, mastic, stoppers, and sea grapes, reminiscent of the east coast. These Gulf coast hammocks, however, are less diverse, lacking several tree species prominent in the east coast hammocks. . . (Johnson and Barbour 1990:455).

There are five species of sea turtle which inhabit Florida's Gulf coastal waters: green, hawksbill, loggerhead, olive ridley, and leather back (Johnson and Barbour 1990:468). Thirteen bird species nest annually on the beaches of Florida (Johnson and Barbour 1990:470-1).

Estero Bay, Caloosahatchee Bay, and Charlotte Harbor are all major estuaries located within the Calusa "Heartland." As a product of freshwater/saltwater interface within the coastal zone, estuaries provide habitat for sea grasses which in turn are utilized as feeding grounds, nurseries and refuges from predation for many species, including: shrimp, oyster, stone crab, scallop, and clam. Coastal waters harbour seatrout, drum fish, bonefish, tarpon, snook, Florida pompano, snapper, mullet, Gulf menhaden, herring and sardine (Livingston 1990:561-568).

Tidal areas and barrier islands are comprised of soils which support cabbage palm, seagrape, sand cordgrass, and leatherleaf fern. On the protected bay side of some barrier islands and bay islands are soils which support mangroves. Mangroves are important in the development of estuarine environments, serving as fish nurseries and in other protective roles. Mangrove forests, which are found along Southwest Florida's coast within an estuarine setting, provide habitat for a great number of animals, including 220 species of fishes, 24 species of reptiles and amphibians (including turtles, snakes, lizards, and frogs), 18 species of mammals (including the raccoon, mink, river otter, black bear, and striped skunk), and 181 bird species. Invertebrate use of mangrove forests is also extensive (Odum and McIvor 1990:542-3).

Soils on Estero Island and in the Six-Mile Cypress Slough support South Florida slash pine, maidencane, and sparse sawpalmetto in sloughs. Cypress can be found in depressions and pineland threeawn in more elevated locations.

Those soils found on sandy flatwoods in inland areas support South Florida slash pine, waxmyrtle, sawpalmetto, and pineland threeawn -- in wetter areas, willow and cypress (USDA Soil Conservation Service 1984:9-12). Pine flatwoods of the Southwest Florida interior consist of slash pine, cabbage palm, grasses, saw palmetto, and low shrubs. This vegetation supports birds, small mammals, amphibians and reptiles, and large mammals -- white-tailed deer, black bear, and the Florida panther (Livingston 1990:110-116).

A brief examination of aerial photographs and topographic maps showing the mouth of the Caloosahatchee River in relationship to Estero Bay suggests that in the not too distant past,

branches of the Caloosahatchee River may have existed to provide the population living on Mound Key in Estero Bay direct access to the river via northerly routes along possible relict river channels. These relict river channels are suggested both by the presence of present-day creeks, sloughs, and wetlands as well as depressed topographical features. Hendry Creek, Cow Creek, Wyonn Creek, and Six-Mile Cypress Slough are examples of possible relict river channels of the Caloosahatchee River (see Figure 17)(USDA Soil Conservation Service and Experiment Station 1944, 1953, 1958 and USGS Quadrangles 1958).

The significance of these possible relict river channels is in their proximity to Mound Key, long-believed to have been the capital of the Calusa Nation. If these waterways existed during Calusa occupation of Mound Key, they would have greatly enhanced the access to the Caloosahatchee River as well as simultaneously providing a better defensive position. As this example illustrates, the configuration of waterways in the past may have varied drastically from present-day appearances. This would also apply to barrier islands which are subject to the never-ending forces of accretion and erosion and have undergone changes in appearance since they began to appear on the Southwest Florida coast approximately 3,000 years ago(Davis 1997:164).

The Southeastern U.S. ethnological province includes Georgia, Florida, Alabama, Mississippi, most of Louisiana and Tennessee, northeastern Texas, southern Arkansas, southern and western South Carolina, and westernmost North Carolina (see Figure 18) (Swanton 1987:1-2). While the Southeastern ethnographic province shares many characteristics, South Florida is often excepted. For example, the prevalence and importance of agriculture as a subsistence base throughout the Southeast during protohistoric times is



Figure 17. Possible Relict River Channels



Figure 18. Southeastern U.S. Ethnological Province (from Swanton, 1987: Map 1)

absent in South Florida. Swanton feels that South Florida Indians were marginal to the Southeastern ethnographic province and "...should hardly be considered participants in it" (Swanton 1987:10). In light of this information, whilst the Calusa are included within the Southeastern U.S. ethnographic province, great care must be taken in understanding the marginal nature of the Calusa participation within this province.

From the descriptions of the Calusa found in historical documents, it seems clear that the Calusa Culture was a complex, highly-stratified chiefdom. The complexity displayed by the Calusa at the time of European Contact resembles that of contemporaneous complex societies based on agricultural subsistence in the Southeastern U.S. But the Calusa economy was based on fishing-hunting-gathering and in this case, the poorly drained nature of Southwest Florida soils may have played a role in the absence of agriculture.

The delineation of South Florida Culture Regions (see Figure 19) provides broad guidance to an understanding of prehistoric cultures in South Florida. Whilst all South Florida natives were hunter-gatherer-fishers, only the Calusa developed to such a high degree of cultural complexity.

The Okeechobee Region was home to the Belle Glade culture which was present at least as early as 500 B.C. and includes both Lake Okeechobee and the Kissimmee River area. [The East Okeechobee Region is generally included within the Okeechobee Region based on the prevalence of Belle Glade pottery found there (Milanich 1994:281).] Constructed earthworks are found throughout the Okeechobee Region and the best known is Fort Center which was thoroughly excavated by Sears in the 1960s (Milanich 1994:279-281).



Figure 19. South Florida Culture Regions (after Milanich 1994:278)

The Fort Center site, located adjacent and west of Lake Okeechobee, falls within the Formative Period. Sears' excavation work at Fort Center revealed a low mound that probably held a charnel house and an associated artificial pond which originally had a wooden platform covered with wooden carvings of animals. Sears found that the wooden platform had burned at one time and that the platform, carvings and hundreds of bundled bodies were deposited into the pond. Some of the bodies were removed from the pond following the collapse of the platform and were buried in a mound.

Sears also discovered exotic artifacts which closely resemble those from Hopewell sites. His discovery of corn pollen led him to the conclusion that corn played an important role in the development of the Fort Center site and its complexity. Purdy argues that there is no evidence of the importance of corn anywhere in the Southeastern U.S. at this time and that archaeological investigations at Fort Center do not reveal any more evidence, whether ceremonial or secular, of the use of corn. Nor has any evidence of corn been found at any South Florida sites dating to this time period. (Purdy 1996:50-62). Others argue that additional investigations are necessary in order to more persuasively argue the definitive existence of any evidence of corn at the Fort Center site (Milanich 1994:291). Regardless, by the time the Spanish arrived in Florida, the Fort Center site was no longer home to a complex culture and instead was populated by only a few aboriginal homes.

The Glades Region encompasses a variety of large wetland features, including the Everglades, Big Cypress Swamp, sawgrass marshes, and coastal mangroves. Slightly elevated areas provide opportunities for hammock development where small archaeological sites have been found, although by and large, the majority of sites are found along the coast,

especially where rivers are located. Along the southeastern coast of South Florida in the Glades Region, Swanton notes that there, "...were a number of small independent tribes, each usually occupying only one settlement" (Swanton 1987:330-1). These settlements along the southeastern peninsula of Florida were subject to the power and threats of the Calusa. The relationship between these settlements and the Calusa seem to have been one that changed, sometimes very quickly, as they sometimes chose to align themselves with other Florida tribes.

Not only did Calusa influence cover a huge geographical area, it also continued for a long period of time. Hann states that:

Also impressive was the staying power of Calusa's rulers and their polity. They maintained their sway over an extensive territory until the end of the seventeenth century and may have enlarged their domain beyond what it was in the 1560s when the Spanish and the French provided the first significant data about the Calusa's status as the most important native power in south Florida... (1991:192).

In the north, decline in the power of chiefs and in adherence to traditional religious beliefs occurred more rapidly after contact with Europeans than it did in south Florida. Most south Florida people were still clinging to old ways in the mid-eighteenth century when they were on the verge of extinction (1991:195).

Further discussion of the continuity of the Calusa culture over centuries following European Contact can be found in Chapter 8. "Isolation of the Calusa" which looks at isolating factors which allowed the Calusa culture to continue despite disruptions caused by early European Contact.

To the south of Florida, most West Indian cultures seem to have little in common with South Florida cultures. One group, though, the Guanahatabeys of western Cuba spoke a non-Taino

language and were nomadic hunter-fisher-gatherers. Prehistorically, they

...lived in the open as well as in caves and relied heavily on shellfish, as well as on fish and game. They used the techniques of chipping and grinding to make tools of stone, bone, and shell. Apparently they were organized into small bands rather than villages (Rouse 1992:20).

Rouse also states that:

Little is known about the relations between the Guanahatabeys and the natives of southern Florida. Both populations were on the Archaic level of cultural and social development in the time of Columbus; and their archaeological remains show resemblances, especially in shellwork and woodwork. To what extent these resemblances are the result of interaction or of parallel conditions remains to be determined (Rouse 1992:20-1).

The question of cultural interactions between South Florida and the Caribbean has resulted in controversy (Sturtevant 1960). With no clear cut evidence in hand, Milanich exemplifies the general attitude toward this topic when he states that, "Some archaeologists are incredulous that they [South Florida Indians] were not in contact with Caribbean Indians... but as yet evidence for such prehistoric connections has not been found" (Milanich 1998:113). Without resolution, this controversy may be narrowed to the argument made by Sturtevant who after reviewing the significance of reported ethnological similarities determined that archaeological investigations have not yet, but may someday show intercultural interaction between South Florida and West Cuba, but that Mesoamerican influences probably played a larger role in the greater Southeastern U.S. (Sturtevant 1960:45). Further research concerning possible interactions between the West Indies and South Florida is needed.

Many Gulf coastal cultures probably shared a common economy involving the exploitation of both nearby marine and terrestrial resources. The Calusa and their coastal neighbours

may as a result of a shared economy and similar environment share a similar material culture.

For example, pile dwellings are practical in a coastal environment such as that inhabited by the Calusa. In fact, pioneers in Southwest Florida utilised pile dwellings in the shallow sheltered waters of bays and sounds. Current information concerning the actual types of habitation structures the Calusa lived in is limited. Frank Hamilton Cushing believed that the area he excavated in 1896 at Key Marco revealed evidence of pile dwellings based on piles and timbers as well as wattle and daub present in the mangrove muck. Cushing envisioned a structure atop pegs which rested on the hard clay floor below the water, but which was also loosely lashed to mooring posts to allow for vertical movement of the structure when affected by extreme water level fluctuations (Cushing 1973:362-3). Cushing points to the difficulties of shoreline navigation as the motivating factor in the location of pile dwellings in shallow offshore waters and close to the rich estuarine resources (Cushing 1973:396). Spanish accounts of Calusa villages describe huts, although a much larger structure housed the chief and his family. Therefore, it seems likely that the Calusa probably utilised a variety of structure types depending upon use and/or status.

Their location on the Southwest Florida Gulf coast allowed the Calusa to exploit a variety of environments, particularly the abundantly rich estuarine environment found there. The Southeastern (U.S.) Indians are reported to have used various techniques in the capture of fish. Weirs, hooks and lines, nets and snares were used as well as arrows, spears, fire, fish poison, and bare hands (Swanton 1987:332-3). It seems reasonable to conclude that the Calusa also employed a variety of techniques for sampling marine, estuarine, and riverine

resources.

Calusa fishing technology recovered from the Key Marco site include coral and limestone drilled anchor stones (still tied together with the original cordage when recovered in 1896), limestone weights and plummets, deer bone harpoon points, bone points and daggers, turtle carapace net mesh gauges, shell weights, wood float pegs and a gourd float, a wooden canoe paddle, and netting and cordage thought to be made of palm fibres (Gilliland 1989). Shell and bone composite fish hooks and bi-pointed throat gorges of bone are also noted in the Calusa region (Walker 1992:232-4).

Ethnohistoric documents show that a great range of food was consumed by natives of the West Indies². One interesting fishing technique noted during Columbus' early voyages to the New World was described thusly:

Their way of fishing appeared so odd and strange to our men... Their method is this: they tie thin cord to the tails of certain fishes which we call 'remora' and send these after the other fish. These remora have a rough patch on their heads which extends down the spine and attaches itself to any other fish that comes near. When the Indian feels that the other fish has stuck he pulls in the cord and brings the two fish out together; and our men saw these fishermen bring out a turtle to whose neck this fish had attached itself. They generally attach themselves to the neck of their victims, since in this way they are certain not to be bitten. I have seen them cling in this way to big sharks (Colon in Cohen 1969:174).

This technique for catching sharks would preclude the need for specialized technology to withstand their razor-sharp teeth and great strength. In addition, ethnological comparisons suggest that large wooden hooks and/or composite hooks with bone points may have been used by the Calusa to successfully capture sharks (Kozuch 1993:15-19).

Sharks were valuable to the Calusa for the resources they could provide. Due to their sharpness and strength, shark teeth were a useful component of tools used in carving, engraving, drilling, and other tasks. More than a century after their excavation from Key Marco, many wooden artefacts still clearly display the distinctive markings of the serrated shark teeth used in their manufacture. Additionally, the rough texture of the shark's skin was a useful tool when used as a sandpaper (Kozuch 1993:1-5).

Wooden-handled shark tooth knives were recovered from Key Marco. The wooden handles ranged from five to seven inches and a shark tooth was hafted to one end (Cushing 1973:370). Cushing also referred to a shark tooth "sabre" which he describes as three feet in length with twelve hafted shark teeth evenly spaced along one edge (1973:372). The utility of shark teeth appears to have influenced the native economy of South Florida as shark teeth are frequently found at interior sites probably as a result of trade.

The great shell mounds and middens found at Calusa archaeological sites tend to visually cloud our perception of the Calusa diet. The role of shellfish in the Calusa diet was important, but not the main source of caloric intake (Walker 1995b:E.7-8). The archaeological record shows a Calusa diet rich in fish; Walker states that:

Bony fishes (Osteichthyes) stand out as the primary contributors to the aboriginal diet based on both minimum and maximum meat estimates. Although the importance of gathering shellfish is dramatically evidenced by massive shell mounds dotting the landscape and quantitatively supported by MNI figures, its role is considerably diminished when viewed from a dietary perspective... (1992b:308).

Archaeological evidence of marine snails, sharks, rays, marine bivalves, small and medium-sized mammals, white-tailed deer, alligator, siren, sea urchin, turtles/amphibians, crabs,

birds, and other animals have been recovered from Calusa sites and complemented the Calusa diet (Walker 1992b:307 and 1995b:E.8).

Ethnohistoric records also give us a glimpse of Calusa subsistence. Of the South Florida Indians, Fontaneda, who lived with the Calusa for several years as their captive, states that, “...the people are great anglers, and at no time lack fresh fish... (Fontaneda [1575] in Smith 1973:35). Fontaneda states that:

The common food is fish, turtle, and snails (all of which are alike fish), and tunny and whale; which is according to what I saw while I was among these Indians.... There is another fish which we here call *langosta* (lobster), and one like unto a *chapin* (trunkfish), of which they consume not less than the former ([1575] in Smith 1973:25).

Fontaneda also mentions that the Indians living in the South Florida Keys ate deer, bear, sea turtles, and raccoon ([1575] in Smith 1973:26). Around Lake Okeechobee, Fontaneda states that:

Fish is plenty and very good. There is another root, like the truffle over here, which is sweet; and there are other different roots of many kinds; but when there is hunting, either deer or birds, they prefer to eat meat or fowl. I will also mention, that in the rivers of fresh water are infinite quantities of eels, very savory, and enormous trout. The eels are nearly the size of a man, thick as the thigh, and some of them are smaller. The Indians also eat lagartos (alligators), and snakes, and animals like rats, which live in the lake, fresh-water tortoises, and many more disgusting reptiles which, if we were to continue enumerating, we should never be through ([1575] in Smith 1973:27).

The Ais Indians of the southeastern Florida coast were reported by Menéndez as having, “...nothing but fish, coco-plums, and palmettos, and none of them in abundance” (Barcia [1723] 1970:98). Remembering that the Spanish descriptions are limited to their experience, their reports may reflect times of plenty as well as times of scarcity.

Father Juan Rogel does report a time of hunger amongst the Calusa. In January of 1568, Rogel wrote to the Bishop of Yucatan requesting maize in order to further his effort to Christianize the Calusa. Using the maize as bait to bring the Calusa to him to learn Christianity, Rogel discovers when he runs out of “bait” at the end of April that:

...as this is the time when the Indians suffer much from hunger, they no longer frequented catechism lessons as much. For with the hunger that hounded them, they gave little importance to the other trade goods (Rogel [1568] in Hann 1991:260-1).

And yet the subsistence pattern of the South Florida native cultures persisted well past European Contact and into the late 17th century. In 1693, Fray Juan de Carmenatri (?) and others wrote a letter to the King of Spain in which they state that the South Florida Indians:

...on the whole do not work at plantings. They are able to sustain themselves solely with the abundance of fish that they catch and some wild fruits. A great part of this land is swamp or subject to flooding (*añegadiza*) (Fray Juan de Carmenatri (?) *et al.* [1693] in Hann 1991:111).

The Calusa had no domesticated livestock even more than a century after Europeans brought cattle, hogs, and other Old World livestock to Florida.³

Archaeological evidence of the use of plants is very limited since the preservation of plants in the archaeological record is rare. Recent investigations of waterlogged deposits in Florida have given us a glimpse of native plant use. Waterlogged plant remains at one Calusa site (Pineland) includes wood chips, cordage, squash and gourd seeds and stems, chili pepper seeds, papaya seeds, and a wooden plank (Walker 1995a:8-16). Walker states that:

The *Capsicum* (pepper) seeds are, so far as is known, the first found archaeologically in eastern North America. The papaya seeds are the first ever identified from any North American site (1995a:8-16).

The historical and archaeological records indicate that various wild roots, mastic fruit,

prickly pear cactus fruit⁴, palm fruits, sea grapes, hogplum, and cocoplum were also consumed by South Florida natives (Walker 1995b:E.8). In 1568, Father Juan Rogel reports that tribute to Carlos, the Calusa cacique, included fruits, and other foods ([1568] in Hann 1991:237). Palmetto berries eaten by the Ais Indians of the Southeast Florida coast are mentioned by Dickinson who describes his shipwreck experiences on the Southeast Florida coast. No doubt the Calusa utilized a plethora of plants for food.

But the identification of the specific plants from ethnohistoric documents can at times be difficult. Fontaneda states of the aboriginals of the Lake Okeechobee area that:

They have a bread of roots, which is their common food the greater part of the time; and because of the lake, which rises in some seasons so high that the roots cannot be reached in consequence of the water, they are for some time without eating this bread ([1575] in Smith 1973:27).

The starchy root referred to by Fontaneda and in other ethnohistoric accounts was thought to have been the coontie plant. The slow-growing *Zamia floridana* or coontie is a cycad whose roots contain abundant starch which can be used for food. But first, the roots of the coontie plant must be processed much as the cassava must, before it can be eaten. The roots must be pounded to a pulp and rinsed of the poison. The coontie starch can then used as a gruel, constantly simmering in a pot over the fire. These same coontie plants were used by pioneers who processed the coontie starch which was then shipped to Key West and made into arrow-root biscuits (Gifford 1944:36-37). It was believed that coontie flour may have been traded prehistorically from villages in the Lake Okeechobee region.

But some researchers have begun to question the identification of coontie as the plant utilized by Native South Florida cultures. While other roots have been promoted in its stead,

currently, the archaeological evidence is silent on root foods (Walker 1995b:E.8).

The restorative properties of plants used during historic times illustrates the wide range of remedies available in prehistoric times. Within the area of Santa Elena along the southeastern Georgia coast, medicinal roots were used by Indians and Europeans alike. The long roots of one marsh plant took on the appearance of a string of beads. On the outside, these “beads” were black on the outside and white, dry, and hard on the inside. The grounded herb was rubbed on the body during bathing and the powder was used for stomach aches (Barcia [1723] 1970:142).

The Spanish suffered from unknown diseases in the Americas and frequently used sassafras as a cure, learning of this tree from the French who had learned of it from the Indians (Barcia [1723] 1970:109).

They prepared the liquid as follows: after having dug up the sassafras root. They sliced it and put it in water for the desired time, boiling it until the water was well colored. This decoction they drank before breakfast, at dinner, and supper, with no other sequence, weight, or measure than their own discretion; and their recuperation from dangerous diseases was amazing. The healthy drank it in place of wine and thus protected themselves from illness (Barcia [1723] 1970:109).

Sassafras soon gained a wide-ranging reputation for its medicinal properties. Sassafras was used extensively as a:

...remedy against many diseases, curing oppilation, and soothing the liver and stomach; it takes away the tertian ague, and causes long fevers to desist; it restores appetite, cures headaches, chest aches, and pains in the side; it causes stones to be passed, induces micturition and menstruation; it cures paralysis; relieves toothache; it serves as well as sarsaparilla or chinaroot in buboes; it cures gout quickly; it makes hands benumbed by illness agile; it soothes the abdomen and relieves motherhood sickness; it promotes fecundity, is fattening, preserves from plagues; and it is most useful in all

cold humours, protracted illness, and flatulence (Barcia [1723] 1970:146).

At the mercy of tropical fevers, Europeans also learned of the Florida-quinine tree or *Pinckneya pubens* which is also known as the Georgia-fever-tree. A small tree, it grows in swamps but today is difficult to find due to its rarity. It is said to be a relative of the South American cinchona tree from which quinine is produced (Gifford 1944:43). Gifford concludes that:

Bitter barks have been used for many years in all parts of the tropics for the control of intermittent fevers. For this purpose the plants belonging to the madder family have long been famous. Various forms of malaria constitute our worst tropical diseases, and according to recent reports are actually on the increase. There is a general agreement as to the efficiency of quinine, but we must bear in mind that manufacturers will insist that there is no substitute for it, although in time past it was criminally adulterated by many dealers. Some doctors in self-defense used the crude powdered Peruvian bark⁵... Quinine has always been scarce in wartime... [D]uring the Civil War in this country ...the bark of the Georgia-fever-tree [was used in place of quinine] (Gifford 1944:42-3).

Limited to the Florida Keys is the princewood tree (*Exostema caribaeum*). The bark of the princewood was also considered a fever fighter along with many other tropical plants (Gifford 1944:43-4). With only this sampling of historically used medicinal plants in the West Indies and Southeastern U.S., it is reasonable to anticipate the extensive use of plants for medicinal and ritual purposes by the Calusa.

Despite the variety of uses the Calusa undoubtedly had for plants, they did not develop a formal agricultural relationship with them. The Spanish report that the Calusa did not practice agriculture and this appears to have been the case prehistorically as well (Milanich 1994:276; Marquardt 1992:2; Widmer 1988:229; and others).

In 1697 when the Spanish missionaries sought to strengthen the souls of the Calusa Indians to make them good Christians through the hard work of agriculture (and develop a surplus of food to support the Spanish presence in Southwest Florida), the Calusa refused to take up agriculture and made it clear to the Spanish that they felt agricultural work to be beneath them. This account certainly points to the Calusa having knowledge of agriculture, and choosing not to make use of it (Hann 1991:43). There is no evidence that the Calusa subsistence strategy included their participation in agricultural activities. As suggested by Goggin and Sturtevant (1964), it seems reasonable to conclude that the Calusa were capable of developing cultural complexity by utilizing the vast estuarine resources available to them as a subsistence base and without the full domestication and cultivation of food plants.

The Calusa had a diverse array of material culture crafted from the resources available to them in the Southwest Florida environment. Based on apparent changes in Calusa material culture through time, cultural periods have been established. Table 1 summarizes diagnostic artefacts and general cultural trends which have emerged from the archaeological record. Changes in Calusa material culture through time illustrate continuity as well as the basis for the historic Calusa culture reported by the Spanish.

To meet their needs in processing and consuming foods, the Calusa utilised pottery and wooden implements. Food processing and serving artefacts recovered from the Key Marco site include pottery, shell dippers and spoons, wooden pestles, tubs, spoons, ladles, and vessels (Gilliland 1989b). Pottery found within the Calusa region illustrates an extended tradition beginning as early as 500 B.C. Decoration, paste, temper, and morphology play roles in the pottery typology developed for the Calusa region. During the protohistoric

Period	Date	Diagnostic Artefacts
Caloosahatchee I	500 B.C. - A.D. 650 1 st half, sea level lower 2 nd half, sea level higher	Thick, Sand-tempered-Plain pottery
Caloosahatchee IIA	A.D. 650 - 800(?) Lower sea level	Pottery types change; middens grew rapidly; shell artefacts diversify; Columbia points; burial in sand mounds and natural sand ridges (minimal grave goods)
Caloosahatchee IIB	A.D. 800(?) - 1200	Additional pottery changes (Perhaps in conjunction w/migrations from Lake Okeechobee area); shell artefacts increasingly diversify; burial in sand mounds and natural sand ridges (minimal grave goods)
Caloosahatchee III	A.D. 1200 - 1350 Sea level above present-day	Pottery types change; burial in sand burial mounds (specific pottery types as associated grave goods — specialised mortuary ware)
Caloosahatchee IV	A.D. 1350 - 1500	Reduction of decorated pottery — more homogenous throughout South Florida
Caloosahatchee V	A.D. 1500 - 1750	Sand burial mounds with European goods added to typical grave goods

Table 1. Caloosahatchee Culture Periods
(based on Marquardt 1992a:Table 2; Marquardt 1992c)

period (A.D. 1350 -- 1500), an undecorated ware becomes prevalent in the Calusa region and is believed by some to illustrate the expansion of the Calusa influence. This undecorated ware, known as Glades Tooled and identified by a lip and rim treatment, continues through the historic period (Cordell 1992:431).

The Calusa focused on the abundant shell in their environment as an important material in tool production. Their extensive use of shell is a result of the dearth of appropriate lithic sources for tool use in South Florida. Shell artefact types include hammers, cutting-edged tools, weights, sinkers, net gauges, anchors, anvils, choppers, knives, and scrapers made from a variety of shell species (Marquardt 1992b).

The availability of resources across space undoubtedly influenced the settlement pattern of the Calusa. It is within the rich and diverse estuarine environment that the Calusa Indians lived. The Calusa *economy of abundance* based on a marine subsistence tradition allowed sedentary behaviour to be established early in prehistory. By as early as 500 B.C., shell middens and mounds began to accumulate rapidly in South Florida as a result of increasingly sedentary behaviour.

A relatively sedentary settlement pattern practised by the non-agricultural Calusa may have been unusual even for contemporaneous agriculturally-oriented cultures. Those aboriginal cultures of North Florida who relied heavily on agriculture may have been subjected to a shifting settlement pattern to accommodate the necessity of allowing depleted fields to lie fallow. Alternatively, without the threat of depleting soil resources, the Calusa could live a more sedentary life along the abundant Southwest Florida Gulf coast.

Because archaeological data is lacking, only limited, sketchy concepts can be proposed regarding the Calusa settlement pattern. The vast majority of archaeological evidence points to coastal settlements arranged hierarchically with larger, presumably ceremonial centres surrounded by satellite villages (Widmer 1988). Use of the interior by the Calusa is less well known. Small hunting/gathering camps inhabited temporarily appear to be represented at interior sites.

Long-term coastal settlement sites include canals, mounds, and large temple structures. The completion of these types of public works projects required a concerted, coordinated effort based on a preconceived notion. Then long-term involvement within a particular landscape would be rewarding to the local population through time.

Moundbuilding is a tradition which occurred throughout the eastern United States in late prehistoric and protohistoric times. In South Florida, construction of earthworks begins early. The accumulation of shell middens in coastal and riverine environments in Florida was already well underway by the Transitional Period lasting from 2000 B.C. -- 1200 B.C. with the increasing exploitation of aquatic resources. As discussed in Chapter 3, beginning as early as 1000 B.C., earthworks were constructed in the Lake Okeechobee and Kissimmee River regions. By the Mississippian Period (A.D. 1000 -- 1731), the Southeastern U.S. as well as South Florida was blanketed with mounds and various earthworks.

Based on Russo's (1991) recent work at Horr's Island near Key Marco, the development of purposefully constructed shell mounds may have its origins in the Late Archaic. During this time, sedentary communities consisting of mobile family units lived along coastal estuarine

resources could have coordinated the effort to construct shell mounds through temporary leadership patterns within their egalitarian society. Additional data, "...suggests that the mounds may not have functioned as a physical symbol of authority upon which resided a permanently marked leader" (Russo 1991:494). Instead, at the core of the specific mound investigated at Horr's Island, Russo believes that there probably exists a burial and/or burial goods which link the early use of shell mounds to the tradition of burial mounds (1991:487-504).

Russo believes that an egalitarian, sedentary society living along the Southwest Florida coast constructed shell mounds thousands of years before previous estimates, arguing that shell mound construction need not be hugely labour intensive. The use of shell mounds within a *ceremonial* context, though, may be rooted in later cultural development (Russo 1991). Archaeological evidence in South Florida supports the slow development of shell middens which eventually metamorphose into purposefully formed mounds. Others point to population pressures as a catalyst for the ceremonial construction of mounds and dating as early as *ca.* A.D. 500 (Widmer 1988;1996) or the presence of a centralised chiefdom as necessary for the successful completion of labour-intensive projects (Milanich 1998). Rather than a stark, sudden process of development, it would seem more reasonable to conclude that the accumulation of shell middens slowly began to transform the landscape and take on meaning through time until the purposeful construct of shell mounds became the natural outgrowth of life within a shell midden landscape. Once shell mounds became features within the landscape, meanings were attached to them.

Throughout the Pine Island Sound/ Caloosahatchee area are village sites containing shell

mounds, middens, canals, and other features reflecting the dense and intense use of the resources. Milanich provides a description of these sites:

These coastal shell sites are most often adjacent to bay-estuary waters. Today some are in or immediately adjacent to mangrove forests, although it is likely that growth of the mangroves occurred after the sites were abandoned. At many of the sites, long, linear shell middens snake through the mangroves for several hundred yards. Others seem to be circular middens. And many others are complex structures combining shell middens with what appear to be mounds and causeways constructed of shell (1994:312).

Milanich further notes that, "Some of the shell mounds appear to be intentionally constructed with distinct strata, while others are middens that accumulated more casually or combinations of the two" (Milanich 1994:313). At the Pineland site on Pine Island, Marquardt believes he may have found evidence that Brown's Mound, one of the large shell mounds found at the site, was intentionally built higher through the use of old midden material (Marquardt 1992a:53). Additional archaeological investigations are necessary before a clear chronology for these sites can be established. The rise and fall of site location preferences will probably show the import of village locations shifting through time.

The construction of extensive shellworks found at major Calusa village sites continues to be the subject of archaeological inquiry. The general lack of extensive areal excavation at such sites has only hinted at the behaviour and activities associated with moundbuilding (Widmer 1996). Based on his work at shell middens and mounds at South Florida sites,

Widmer states that:

These sites are typically composed of a number of overlapping lenses of natural and cultural deposits which have different physical matrices. These lenses are relatively small in area and can vary in thickness. Differences among these discrete strata may be very subtle, consisting perhaps of a change in molluscan species composition or in the percentage of shell to

sand (Widmer 1996:14).

Through his recent investigations at the Key Marco site, Widmer has identified what he believes are mound construction stages as well as post moulds indicating the location of structures. Working primarily on one shell mound, Widmer has hypothesized that: 1) some shell mounds were purposefully constructed and appear to have undergone stages of development representing repeated expansions horizontally and vertically; 2) through the use of certain shell species in the construction of shell mounds, the visual appearance of some shell mounds created a special effect -- no doubt setting them apart from common experience; 3) post moulds found within the shell mound strata represent pile structures since no living floor was discovered; and 4) post moulds found in an adjacent sand strata also appear to represent a pile dwelling (Widmer 1996).

Widmer concludes that the shell platform mound he investigated at the Key Marco site dates from A.D. 500 -- 1500 and reflects spatial continuity in social differentiation through its contrast with the adjacent structure constructed on ground level (Widmer 1996:24-5). Faced with a myriad of discrete depositional features, Widmer appears to have successfully isolated purposeful, planned, coordinated expansion of a truncated platform mound. His success begins a fresh page in protohistoric archaeological investigations in Southwest Florida. Additionally, Widmer's identification of pile dwellings through post mould patterns is intriguing. This would support Cushing's conclusions from his early excavations at Key Marco which suggested to him the use of pile dwellings.

Linear shell ridges have also been investigated as some are more regular and symmetrical

than others, although they all typically contain midden materials. Perhaps the most pronounced, regular linear shell ridges occur at Big Mound Key located north of Pine Island at Cape Haze. At the southern part of this large site which contains shell mounds there are at least nine linear shell ridges running nearly perpendicularly off an apparent aboriginal canal feature which provides access to the site (Marquardt 1992a:45). Limited archaeological research of Big Mound Key has included efforts to understand the development of the linear shell ridges. Thus far, Marquardt has concluded that:

The finger-like, low shell ridges cannot be accounted for by non-cultural processes, such as storms, and seem to have been constructed by purposeful deposition, though this cannot yet be demonstrated unequivocally (1992a:47).

Upchurch *et al.* (1992) suggest a functional relationship between the canal and the linear shell ridges at Big Mound Key:

It is highly possible that both canal and finger ridges were constructed simultaneously. The strongest evidence for the human origin of the Big Mound Key finger ridges is their distribution. It is unlikely that storms or other natural agents could distribute the finger ridges in a symmetrical pattern fanning away from the central canal. The canal and finger ridges face the direction of maximum fetch, which would indicate that they had a practical purpose as protection from waves coming up the bay (Upchurch *et al.* 1992:68).

More importantly, these authors suspect that linear shell ridges at other sites within the Calusa "Heartland" are more likely to have been the result of natural rather than cultural forces. They point to the instability of midden materials unprotected by vegetation, especially when coupled with storm events (Upchurch *et al.* 1992:68, 71). Further research is necessary as it becomes clearer that descriptions of shellwork sites lend little to an understanding of their construction or use.

It seems likely, though, that shell mound construction and the associated construction of a structure atop the shell mound, creating a platform mound, required a labour force which was controlled through supervision to produce the desired results. It may be some time after A.D. 500 when rapid midden accumulation begins that purposeful moundbuilding for ceremonial use began. If, as Russo (1991) contends, the amount of labour necessary for shell mound construction may be limited to the patterned disposal of food refuse, archaeologists may be left to ponder the type of society involved in early shell mound construction and the moment in prehistory when these monuments became ceremonial in nature.

The coastal environment in which the Calusa flourished meant that they were surrounded by water features which necessitated water-borne transportation. The natural water features of South Florida, ranging from wetlands and swamps to rivers and creeks, served as a transportation web for the native cultures living there. The use of dugout canoes allowed the movement of people and materials through this web. The Calusa utilised dugout canoes to travel within the protected waters of the bays, rivers, creeks, sloughs, and swamps. The Calusa also traveled the gulf coastal waters to reach Cuba in historic times.

Perhaps, then, the construction of canals to allow convenient water access in certain locations should not be wholly unexpected. Because water comprises so much of the Southwest Florida environment, aboriginal canals may have been an extension of that environment, but probably also had meanings associated with them. Utilised in coordination with existing natural water features are four known canal groupings in South Florida: Cape Sable, Naples, Ortona and Pineland/ Cape Coral.⁶

Most South Florida aboriginal canals are associated with large, apparently important sites within the geographical area influenced by the Calusa culture. They vary in length, width, depth, and alignment. But each suggests an overall design that shows an understanding of local hydrological conditions and takes advantage of those features.

Most southerly are the Mud Lake Canal (6.3 km long) and Snake Bight Canal (.85 km long) which are located at Cape Sable near the Florida Keys. Bear Lake Mounds, a long-term habitation site, is found nearby and it is believed that these canals allowed access to interior freshwater lakes while simultaneously providing access to the Ten Thousand Islands, Florida Bay, and the Florida Keys (Wheeler 1998).

Wheeler states that:

Water was not only a primary source of food and raw materials, it provided highways upon which one could travel to access these natural resources. Perhaps more importantly, water courses served as physical links to the world of social and political relationships that would be accessed when traveling through neighboring areas (Wheeler 1998:23).

Wheeler hypothesizes that Snake Bight Canal was built first around A.D. 250 and was replaced later by Mud Lake Canal sometime around A.D. 700 -- 1200, making these the earliest aboriginal canals known in Florida (Wheeler 1998:22).

The Naples Canal (1.3 km long) is located at the northern end of the Ten Thousand Islands along Florida's Gulf coast which is immediately south of the Calusa "Heartland." Linking the Gulf of Mexico to Naples Bay, the Naples Canal provides access to the calmer bay waters which were used heavily for aboriginal canoe transportation (Luer 1998). Approximately 18 kilometres to the south of the Naples Canal is the Key Marco site.

Luer notes that:

...the aboriginal society that built the Naples Canal must have been able to organize, command, and support the labor needed to accomplish such a large project. Such organization would include the production, redistribution, and consumption of food surpluses needed by the laborers who built and maintained the canal (1998:34).

In addition, the location of the Naples Canal, "...might have been a reflection of social power in the landscape" (Luer 1998:34). Those canals more closely associated with large habitation sites probably do reflect social power across the landscape.

Two related aboriginal canals constructed to the west of Lake Okeechobee. One canal (3.2 km long) stretches from Turkey Creek southeast to the Caloosahatchee River while the second canal (3.7 km long) is based on a second branch of Turkey Creek and a round pond, running southwesterly and draining into Lake Flirt, an historic feature of the Caloosahatchee River which has since been drained and channelised. At the apex of these two canals is the Ortona Earthwork Complex (Wheeler 1995). These canals probably enhanced control of both land and water traffic:

The canals also represent a tremendous amount of labor invested by native workers in digging their channels in such regular fashion, and may hint at the existence of *construction specialists* [Emphasis mine] who designed and supervised mound, earthwork, and canal construction (Wheeler 1995:278).

The Ortona Earthworks Complex is a large, significant site consisting of a series of associated oval and circular mounds, middens, linear earthworks, and an artificial pond. It is found to the north and east of the apex of the two aboriginal canals which serve to link two branches of Turkey Creek to the Caloosahatchee River. Results from archaeological investigations suggest the occupation and long-term use of this site from *ca.* A.D. 200 -- 1700. It is hypothesized that various earthworks features were constructed through time and

that:

The Ortona site's well-developed canals suggests a highly maintained communication and transportation system that would have reinforced resource distribution, political ties, and movements of people between the coast and the interior (Carr *et al.* 1995:260).

The Pine Island Canal (4.0 km long) crosses the entire northern end of Pine Island, providing a link between Pine Island Sound and Matlacha Pass which skirts the mainland. This artificial water feature allows water traffic to cross Pine Island and thereby avoid the at least 10 kilometre canoe trip around Pine Island's northern end. At the western end of this canal is the Pineland site (see Appendix A) which is extensive and multi-component in nature (Luer 1989).

The Cape Coral Canal (6.5 -- 15.5 km long) is believed to be in alignment with the Pine Island Canal, continuing the east-west orientation on the mainland and beginning at Matlacha Pass and reaching to Hancock Creek, a tributary of the Caloosahatchee River (Luer 1989). Luer estimates that travel to the Caloosahatchee River would be shortened by 13 kilometres (1989:105-6).

The distance- and time-saving nature of these artificial waterways are important to any discussion of their function and significance. Overall, known aboriginal canals in South Florida average roughly 3.5 kilometres in length and roughly 6 metres in width and nearly 1 metre in depth below ground level (based on Table 1 in Luer 1989:97). From the alignment of these constructions, it is obvious that an overall plan was required, and that only a coordinated effort would result in its successful completion. The effort in earthmoving alone must have been absolutely monumental.

In practical terms,

It seems that southern Florida's long, linear canals were built for transportation, facilitating the movement of people and resources.... The association with major sites, such as Ortona and Pineland, suggest political and economic importance in addition to possible ceremonial functions (Luer 1989:109).

The expansion of waterways by human intervention was costly. But,

The canals probably were advantageous economically because they assisted and strengthened existing patterns of needed exchange. Canals probably were advantageous politically because they served as conduits which could be controlled and monitored. Militarily, canals assured shorter, more protected routes which ensured fast, safe, and reliable travel (Luer 1989:112).

The control of the movement of people and things across space eventually translated into the powerful Calusa culture. Most of the canals in South Florida are believed to have been in use during the late prehistoric and protohistoric periods which coincides with the Calusa era.

The complexity of canal construction probably required specialists who guided the appropriate construction activities. Due to the manmade nature of these waterways and their great size, as monuments within the landscape, canals served to remind viewers of any ceremonial or ritual activities that might have been associated with the canals as well as farther reaching concepts concerning the makers of the canals. These meanings would also be subject to reinterpretation through time. The frequent use of small canal features within important South Florida sites (Luer 1989:108) also reflects the importance of these artificial waterways on a smaller scale (see Appendix A).

For those Calusa living on the islands and keys along Florida's southwest coast, water travel

would have been involved with many activities. Spending hours and days in canoe-travel was probably not an unusual occurrence for the Calusa. Wooden canoes were probably the most important piece of material culture to the Calusa. The watery landscape of the Calusa heartland included swamps, sloughs, rivers, creeks, embayments, and the Gulf of Mexico. Prehistoric transportation in this region necessitated the use of some water-bourne travel. Even historic pioneer travel was focussed on the waterways since overland routes were next to impassable prior to the construction of modern roadways.

Dugout canoes made from tree trunks were the main Calusa vehicle of transportation. Canoe travel along the coast was effective and access to the interior was readily available via rivers such as the Caloosahatchee, Estero, and Imperial. Waterways were utilized for trips of short or long duration.

Both small and large canoes were crafted for the use of the individual or to be powered by many. For trips of any duration, fire could be carried within the canoe and even utilized during the trip. A canoe, then, could serve as a shelter.

A catamaran-style structure of two canoes lashed together is also recorded by the Spanish. Gonzalo Solís De Merás, thought to be the official chronicler of Menéndez's 1565 expedition to Florida, states that upon the return of Cacique Carlos' sister, Doña Antonia, from Havana to Southwest Florida:

Within 2 hours [came Carlos], with as many as 12 canoes, and two of them fastened one to the other, with decks covered with awnings of hoops and matting... (Solís De Merás in Connor 1964:193).

Radiocarbon dating of a sample of aboriginal canoes shows that as early as 3000 B.C., canoes were a part of aboriginal life in Florida. The earliest known canoes are made of pine and rather crude and somewhat unfinished in appearance. Later examples reflect further working where bow and stern are slightly beveled upward and greater overall finishing is evident. In addition, a canoe form with a prominent overhanging bow is contemporaneous to both early and later canoe forms. It is thought to have been used in larger bodies of water to negotiate rougher waters.

During Columbus' early voyages to the New World, he reported the use of dugout canoes by the aboriginals. From his first voyage, while in the Bahamas, Columbus states that:

They came to the ship in boats made from tree-trunks, like a long boat all cut of a single log. They are marvellously carved in the native style and they are so big that forty or fifty-five men came in them. There are others smaller, so small that some carried only a single man. They row them with a paddle like a baker's shovel and they go wonderfully fast. If one capsizes, they all start swimming and right it (Bartolomé de las Casas in Cohen 1969:56-7).

From the following description, one senses that Columbus was astonished to discover a man in a canoe so far from land:

When I was in mid-channel, between Santa Maria and this other island which I have named Fernandina [Long Island], I found a man alone in a canoe crossing from the one to the other. He was carrying a lump of their bread, about the size of a fist, and a gourd of water and a bit of red earth which had been powdered and then kneaded; also some dried leaves which they must value very highly since they gave me a present of them. He also carried a native basket containing some glass beads and two *blancas*, by which I knew that he had come from San Salvador to Santa Maria and was now on his way to Fernandina (Bartolomé de las Casas in Cohen 1969:62-3).

Movement of trade items was quick and efficient by canoe between the islands. The West Indian natives were skilled mariners. Between Hispaniola and Tortuga (an offshore island) Columbus' crew:

...found a solitary Indian in a small canoe and were surprised that he had not sunk for the winds and seas were very high. They picked him up in the ship and took him to Hispaniola where they put him ashore with many presents (Colon in Cohen 1969:86-7).

Columbus states that these canoes have no sails (Bartolomé de las Casas in Cohen 1969:74).

Also, seasonally the West Indian natives would travel by canoe to uninhabited islands in order to catch birds, crabs, and fish (Colon in Cohen 1969:81). The Spaniards observed large canoes concealed by bushes along the shore and also claim to have, "...found another canoe about seventy foot long capable of taking 150 men and also hollowed out of a single trunk" (Colon in Cohen 1969:84).

The variety of sizes is noted by Columbus:

They are of various sizes, some as large as a *fusta* of eighteen benches. But they are not as broad, since they are hollowed out of a single tree. A *fusta* would not be able to keep up with them, however, for they are rowed at an incredible speed. In these they travel and transport their goods between the islands, which are innumerable. I have seen some of these canoes with eighty men in them, all rowing (Colon in Cohen 1969:119).

De Soto's entrada also encountered large dugout canoes during their travels in the Southeastern U.S. Determined to follow the Mississippi River to the Gulf of Mexico, they were followed by aboriginals in large canoes. Garcilaso de la Vega reports that:

The command ships and others like them were so immense that they supported twenty-five oarsmen on each side, and in addition, held twenty-five or thirty warriors placed successively from poop to prow. Thus many of these canoes had a capacity for seventy-five and eighty passengers with each of them placed in such a manner as to be able to fight without obstructing the others (de la Vega 1996:575).

Additionally, Garcilaso states that canoes were the only watercraft used by the Indians throughout the De Soto entrada's travels (de la Vega 1996:574).

In his travels, Columbus also reached the Gulf of Paria off the coast of present-day Brazil where he noted that:

Their canoes are very large and better made and lighter than those of the other Indians, and in the middle of each they have a small shelter, like a cabin, in which, as I saw, the chieftains sat with their women (Columbus in Cohen 1969:214-5).

It is interesting to note that while pine was apparently used extensively in the dugout canoes of native Floridian cultures, the use of cedar as the preferred tree for Mayan dugouts in Honduras suggests that differences did exist between cultures (Thompson 1951:71). Of her survey of aboriginal canoes discovered in Florida, Purdy states that:

Two of these are exceptionally large, 50 feet and 45 feet long, and the other two are made of tropical woods that do not occur in Florida. All of these probably belong to the historic period but they have not been radiocarbon dated (1991:276).

Historic reports of the use of sails by the natives of North and Central America raises questions concerning whether or not the use of sails originated with the natives or with the newcomers. Thompson argues that Middle America and the Mayans used sails with their canoes (Thompson 1951:71-2).

Rouse states that, "Unlike the present inhabitants of the West Indies, the natives traveled by sea whenever possible," using carved and painted canoes that were powered through the use of paddles (Rouse 1992:16). It is likely that the Calusa also spent much of their everyday lives within canoes to sustain their livelihood as well as to travel within their watery world. Investigations of skeletal remains from Useppa Island in Pine Island Sound, the Calusa "Heartland," and dating to the third millennium B.C. reveal relatively sturdy ribs and arm bones which can be attributed to habitual canoe-paddling (Hansinger 1992:403-4).

Purdy notes that:

...the implication exists that the use of waterways determined energy capture, capital building, and culture evolution. By using canoes to transport people, supplies, and raw materials, thousands of calories were saved that could be put to other tasks (MacDonald and Purdy 1982 in Purdy 1991:281).

Swanton notes that Gulf coastal communities were larger than interior communities in the Southeastern U.S. prior to the adoption of agriculture. With the adoption of agriculture, Swanton believes that interior populations would have the potential to increase much faster than those on the Gulf coast where maize could not easily be grown. Swanton also characterizes fisher-hunter-gatherer societies as typically remaining as highly autonomous bands (Swanton 1987:17-18). In contrast, Swanton describes the Calusa of Southwest Florida as a powerful, complex, hierarchical non-agricultural coastal culture (Swanton 1987:18).

Calusa sites are numerous on the barrier islands found off the Southwest Florida coast and on islands in the protected embayments and lagoons. The larger sites consisting of shell middens and mounds are believed to have been used for habitation. The composition of shells may vary, but each site has been landscaped into various features (Milanich 1994:313). Typically, shell middens consist of an accumulation of shell and debris. Shell mounds are thought to have been a more purposeful construction.

Linear shell middens occur frequently along the coastal areas of embayments. Other coastal sites include circular, crescent-, and horseshoe-shaped middens and larger shellwork sites (Milanich 1994:312). Common features found at some of the larger Calusa sites are aboriginal canals, sand burial mounds, and shell middens and mounds (see Appendix A).

The interior of the Southwest Florida Gulf coast is not well-known archaeologically. The presence of riverine-related sites are known in the interior and include mounds and middens. Some of these riverine sites are associated with the Calusa culture and tend to be larger than smaller artefact scatters associated with freshwater marshes in the interior (Austin 1987; Milanich 1994:312-4).

Year-round occupation of Calusa sites is currently being investigated (Walker 1995b:E.9). The seasonal availability of certain food resources is a reasonable basis for the belief that the Calusa involved themselves in some form of movement -- perhaps only a part of the population participated in this movement to secure resources found elsewhere.

Archaeological data and historic accounts provide the basis for our understanding of Calusa settlement life. Early explorers such as Menéndez reported village sites, including the Calusa capital, Calos. Larger settlements consist of shell mounds thought to have been used for habitation and shell temple mounds along with sand burial mounds. Shell middens are also present, but are considered the build-up of discarded food and trash. It is believed that the Calusa also travelled to the interior -- sometimes for hunting and other times for trading with or exacting tribute from other tribes. These activities left little trace in the archaeological record. Shell and artefact scatters are the scant evidence, often found near freshwater, suggesting temporary activities such as camping or hunting. The coastal shell middens and mounds do not reveal a large proportion of remains from interior animals.

Research is currently underway to determine whether or not there appears to be a preconceived pattern set for the villages inhabited by the Calusa. One parallel between two

large Calusa sites (Pineland and Mound Key -- see Appendix A) is the placement of a canal between two large, imposing shell mound complexes. It could also be that both of these sites are ceremonial in nature and that there is a pattern ascribed to ceremonial sites.

Most archaeological sites identified as Calusa are coastal sites consisting of shell mounds, middens and other associated features. The lack of agriculture does not seem to have prevented their long-term habitation of these sites as suggested by their sheer size. Appendix A provides further information on three large Calusa sites: Mound Key, Pineland, and Key Marco.

Geographically, Swanton notes that, "The chief centers of their population were Charlotte Harbor and the mouth of the Caloosahatchee River" (Swanton 1970:27). And Walker states that, "The abundance and enormity of sites in the Caloosahatchee coastal area denote a large population, perhaps the densest of precolumbian south Florida" (Walker 1995b:E.9). Because current knowledge of the prehistoric archaeological record is limited, early populations in the Calusa "Heartland" cannot be predicted with any accuracy.

Ethnohistorical documents provide us with some information regarding the Calusa population during historic times. Hann states that:

Various witnesses set the total Calusa population in 1697 at about 2000 people. Fray López noted that upon the friars' arrival the Indians at the Key of Carlos amounted to about 400 men and he described the children as unnumerable. Because the women remained at home indoors he had not seen them at the time he wrote the letter except for twenty or so in the chief's house while they were building a structure of their own. That the large population of this head village was housed in only sixteen structures indicates that all were large communal structures like that of the chief, similar to the five structures of 1743 at the mouth of the Miami River

mentioned by the Jesuits as housing ‘up to one hundred and eighty people’ (Hann 1991:42).

In Calos alone, Fray López estimated that there were 1000 people ([1697] in Hann 1991:158).

In 1732, the Council of the Indies included in their estimation 6000 South Florida Indians who waited to cross to Havana and to become Christians (Hann 1991:384). This seems to be an inflated figure which may be a result of exaggeration on the part of the religious people in an effort to gain official assistance from Spanish authorities.

Our knowledge of the Calusa language is limited to ethnohistoric documents. The Calusa left no written records. Plagued by a lack of data, only a few Calusa words have been preserved (Swanton 1922:28). Linguistic investigations by Julian Granberry have resulted in an interesting theory relating Gulf coastal populations.

Granberry, a specialist in Southeastern and Antillean prehistory, has used his interest in Florida prehistory to study the Timucua language of Florida and Georgia. The Timucua and Apalachee languages prevailed in northern and part of east-central Florida. The results of his study of the Timucua language are startling. Granberry has concluded that the probable origin of the Timucua language is South America (Granberry 1995:157).

Next, Granberry studied the Calusa language, comparing its few known words to Native American languages of the Southeastern United States as well as Meso and South American languages (Granberry 1995:156-173). Granberry is limited by the scant historic data

available on the Calusa language to date. He notes that there are only a dozen lexical forms which have contemporary Spanish translations. By scouring historic Spanish documents, Granberry finds a total of 57 known possible Calusa language forms "... plus a few additional suspect toponyms, such as Kissimmee, not explicitly identified by language in any source" (1995:156). Perhaps the most important source for Granberry is Fontaneda's account of living amongst the Calusa for 17 years as a captive. In his account, Granberry finds a group of six ethnic/political entities within central and southern peninsular Florida -- each of which spoke a dialect of the Calusa language. These entities reached north of Tampa Bay on the Gulf Coast and south through the Keys.

Granberry found through etymological comparison that:

...[C]omparison of the 12 translated forms with other native North and South American languages showed similarities to only one -- the Tunica language, formerly spoken on the lower course of the Yazoo River in upper Louisiana and adjacent western Mississippi and eastern Arkansas (Granberry 1995:157).

Granberry goes on to state that:

The Calusa-Tunica parallels are specific, detailed, uniform, and regular, all canonical requirements for the demonstration of genetic relationship in comparative linguistics. These similarities are far above the chance level -- every constituent morpheme but one in the 12 translated Calusa forms has a patterned, similar or identical analog in Tunica. This is particularly striking since the Tunica forms used for comparative purposes date from almost four hundred years later than the Calusa date, and Tunica-Calusa similarities must consequently have been much greater both in the 1500s and in the more distant past (Granberry 1995:157).

Granberry further concludes that there existed different dialects of the Calusa language. He was able to differentiate between a northern and southern dialect where the northern dialect was found in the Tampa Bay area. The southern dialect would have included all of

southwest Florida at least from Charlotte Harbor southward through the Keys and including the Miami area. It is this southern dialect that Granberry considers dominant which is in keeping with the location of the Calusa capital in southwest Florida (Granberry 1995:166).

In reviewing the overall distribution of languages across the Florida landscape at the time of official European contact in the mid-16th Century (see Figure 20), Granberry states that:

The Calusa language distributional data correlate interestingly with the rough boundaries of the Big Bend (North Peninsular Gulf Coast), Central Gulf Coast, Caloosahatchee, Kissimmee Valley and Okeechobee Basin, and Glades archaeological areas (See Milanich 1994:xix), separating this combined segment of the peninsula linguistically as well as in broad artifactual traditions both from the Timucua regions of Northeast and North-central Florida and from the ultimately Muskogean Apalachee and Choctaw regions of West Florida. It is these data which suggest that the Gulf coast from the Aucilla south through the Tampa Bay region may have been a Calusa-speaking corridor to South Florida. It is certainly archaeological, and therefore culturally, distinct (Granberry 1995:166).

The Gulf Group languages of the lower Mississippi Valley heavily influenced neighbouring Southeastern languages. In fact, Granberry suggests that the Southeastern languages of Natchez, Tunica, Yuchi, and other related languages,

...may have spanned the entire area from the Mississippi east to the Atlantic and from the foothills of the Appalachians south to the Gulf. That they did indeed spread into Florida and were perhaps the first and only languages of the peninsula until the arrival of the Timucua in the Late Archaic and Early Gulf Formational periods is evidenced by the language data cited in this paper, which suggests that Calusa was not simply a South Florida linguistic outlier isolated from its Lower Mississippi kin. It was connected to the homeland through a sporadic but generally continuous line of settlements and peoples from Louisiana around the Gulf Coast to South Florida (Granberry 1995:167).

This is reminiscent of Cushing's theory regarding Gulf Coastal adaptation (see Chapter 5).



Figure 20. Historic Distribution of Florida Native Languages (based on Granberry 1995)

A brief look at the Tunica culture supports Granberry's theory. In prehistoric times, the Tunica culture is found in the lower Mississippi River Valley (Swanton 1987:32). During DeSoto's passage through the Southeast, the Tunica could still be found on the floodplains of the Mississippi River, but by the seventeenth century, they had re-located to the bluffs at the edge of the floodplain (Swanton 1987:17). At that time, they were at the bluffs near Vicksburg (Swanton 1987:20) (see Figure 21).

Characteristics of the historic Tunica culture have been recorded by early explorers. The Tunican population, like many of the Southeastern United States, was greatly reduced from the time of De Soto's Expedition until other Europeans arrived in the area (Swanton 1987:13). By the latter half of the 17th Century, the Tunica had settled near the mouth of the Yazoo River where they boiled salt for trade (Swanton 1987:197-9).

The Tunica subsistence strategy as recorded by Europeans includes the hunting of game, gathering of seeds and fruits, and the growing of sunflowers, squashes, corn, and beans which is typical for the Lower Mississippi River Valley at that time. Perisimmons appear to have played an important role in the Tunica diet during one month of every year. Overall, the Tunican diet was probably fairly typical of that found in the rich alluvial soils of the Mississippi River Valley (Swanton 1987:291). The Tunica also built above-ground granaries to securely store their surplus corn and squashes (Swanton 1987:380).

Both Tunican men and women wore their hair long (Swanton 1987:501 &507).



Figure 21. Historic Location of Tunica Tribes (based on Swanton 1987)

Swanton states that:

The Tunica temple in their old homes on the Yazoo was on a mound like that of the Natchez and was visited by a war party, just before setting out and immediately after their return, but the Tunica performed fewer ceremonies about it than did the Natchez or Taensa around their own (Swanton 1987:780).

Burial customs of the Tunica appears to have included the burial of the dead in the earth (Swanton 1987:811). Human sacrifices among the nearby Natchez and their allies are also reported at the death of an important individual (Swanton 1987:812).

Swanton's summary of the Tunica states that:

The customs of the Tunica seem to have resembled those of other lower Mississippi tribes. According to one authority, work in the fields fell mainly upon males. Persimmons were especially abundant in their country, and were put up in large quantities by them. They had temples but not as elaborate ceremonies connected with them as the Natchez. So far as we know, they buried their dead in the earth and did not exhume the bodies for reburial. They were particularly addicted to tattooing and the women blackened their teeth. They were skilled in dressing skins and making pottery, and were much engaged in the boiling down and selling of salt (Swanton 1987:819).

Granberry suggests a heavy dose of cultural interaction between Tunica and Calusa cultures. Where cultural diffusion would quickly result in differences between the original and the adopted trait, Granberry believes the languages to be so closely related that only a continuous or relatively continuous cultural interaction could account for the similarities (Granberry 1995).

Granberry's theory of cultural contact between the Calusa and the Tunica cultures is further explored in Chapter 5. "Theory," and it is clear that research in the comparison of these

two cultures may reveal additional clues to the nature of any relationship between them.

Calusa Politico-Religious System

Religious aspects of the Calusa have been recorded in ethnohistoric documents. Spanish records document the Calusa religion at three distinct and separate times as a result of their mission efforts. The Calusa continued to reject Christianity even as their culture collapsed in the 17th century probably as a result of epidemics and warfare with displaced Southeastern Indians flowing into the Florida peninsula.

The first Spanish mission effort among the Calusa was led by Jesuit Father Juan Rogel who began work among the Calusa in March of 1567 (Hann 1991:221). Rogel reports that the Calusa believed that three entities controlled the world. The most powerful controlled what Rogel called, "...the most universal and common things... such as heavenly movements and the seasons (*tiempos*), etc." ([1568] in Hann 1991:238-9). Kingdoms, empires, and republics belong to the realm of the next most powerful entity. The least powerful of the three is associated with warfare and is believed to align with the winning side (Rogel [1568] in Hann 1991:239).

These three powerful entities were matched in the natural world by three primary Calusa leaders. During the historic period, the main players in the Calusa politico-religious system included the Calusa chief, the military captain, and the head shaman. These important positions were held by people who were often related and each controlled esoteric knowledge to further advance their positions (Hann 1991:192-3).

It was clear to the Spanish early on that the conversion of the Calusa chief was the key to converting the Calusa people. In order to achieve the desired results, the missionaries set out to learn of the native religions in order to better apply Christian doctrine. Father Juan Rogel in a letter to Father Jerónimo Ruiz del Portillo in Lima, Peru dated April 25, 1568 discusses several concepts of Calusa religion as he understands them. Having lived among the Calusa when the mission and Fort San Antonio were in existence, Father Rogel probably learned more about Calusa religious concepts than anyone else.

They say that each man has three souls. One is the little pupil (*niñeta*) of the eye; another is the shadow that each one casts, and the last is the image of oneself that each one sees in a mirror or in a calm pool of water. And that when a man dies, they say that two of the souls leave the body and that the third one, which is the pupil of the eye, remains in the body always. And thus they go to the burial place (*enteramiento*) to speak with the deceased ones and to ask their advice about the things that they have to do as if they were alive. And I believe that the devil speaks to them, because from what they [the deceased] say to them there, they learn about many things that happen in other regions or that come to pass later on. They also tell them that they should kill Christians and other evil things (Rogel [1568] in Hann 1991:237-8).

Fear of the dead appears to have surfaced by the last mission effort in 1743. This fear of the dead by the South Florida Indians was noted by the Jesuit missionaries who participated in the final mission effort to the Calusa:

They have a great fear of the dead and its effect appears [in] their not suffering their being named; their daily offering to them of foodstuffs, tobacco [and] plants [?] (*llebas*); the covering of the graves with reed mats (*esteras*) and the bestowing of gifts (*regalar*) on the graves. They maintain a guard in the cemetery, which they frequent with pilgrimages (*romerías*), and they keep it somewhat distant from the village, fearing lest the dead should do them harm (Alaña [1760] in Hann 1991:423-4).

Perhaps this fear is in response to European diseases which by the end of the 17th century may have begun to make large inroads into the Calusa population. Jesuit Father Alaña also states that, "... they obstinately affirm that human souls do not survive their bodies...([1760]

in Hann 1991:424).

Illness was believed to be the result of one of the souls leaving the body. To cure illness, shamans went in search of the missing soul and drove it back to the house of the ailing individual, building fires at windows and door, ensuring that the soul does not leave again. To return the soul to the person and remove the illness, shamans conducted ceremonies which focussed on the nape of the neck to put the soul back through it (Rogel [1568] in Hann 1991:238).

For Father Rogel, the Calusa belief in the transmigration of souls was the biggest obstacle in his efforts to convert them to Christianity. According to Rogel, the Calusa believed, “...that when a man dies, his soul enters into some animal or fish. And when they kill such an animal, it enters into another lesser one so that little by little it reaches the point of being reduced into nothing” ([1568] in Hann 1991:238). Without a Christian concept of rewards and punishments in an afterlife, the Calusa could not be persuaded to consider their actions in the present as crucially affecting the state of their soul in an afterlife. The Calusa also did not believe in the existence of a devil as an antithesis of God (Rogel [1568] in Hann 1991:243).

At the death of the cacique or his main wife, their servants were killed (López de Velasco [1569?] in Hann 1991:316). The death of a son of a cacique resulted in sacrifices such that: “...each time a son of the cacique dies each inhabitant sacrifices his sons or daughters, who go in company of the death of the cacique’s son...” (López de Velasco [1569?] in Hann 1991:316).

Other sacrifices were also known to occur. But these sacrifices appear to have resulted in the death of captives:

...each year they kill a Christian captive so that they may feed their idol, which they adore in [doing] it. That they say their idol eats human men's eyes. And they dance with his head each year (López de Velasco [1569?] in Hann 1991:316).

Carlos and his father are reported to have sacrificed close to 200 shipwrecked people (Barcia [1723] 1970:102). These 200 shipwrecked were probably from the small number of people not slaughtered at the time of the shipwreck accident.

Menéndez was told by Indians on the east coast that shipwreck survivors were often held captive and that Carlos, "...annually sacrificed a Christian to the Devil" (Barcia [1723] 1970:102). The use of captive shipwreck survivors as sacrificial victims would have allowed the loss of human life without affecting the aboriginal population itself. Menéndez de Avilés states in a petition to the king that:

The first year I set out on the conquest, I ransomed from among the Indians, thirty-two persons, men and women, who had been slaves of the caciques and Indians for fifteen, eighteen and twenty years. There were some who had been numbered among two hundred and thirty Spaniards, men and women together, from wrecked ships, and each year [the Indians] sacrificed seventeen or eighteen in the feasts they hold, and they used the heads in their balls and ceremonies. *They are so bloodthirsty in this because they consider it a great glory and victory for them and that the other caciques of the interior may hold a high opinion of them and they may triumph, saying that they live on the seashore and are the masters of the Christians and hold them as slaves*[Emphasis mine] ([1574] in Connor 1925:35).

Others testify to the witnessing the same sorts of information, including Antonio Perez who states that:

...he saw likewise how Cacique Carlos killed many Spaniards, because this witness counted and saw at the foot of a tree more than fifty heads of Christians whom the said cacique had sacrificed, from ships which had put

in there in storms...([1574] in Connor 1925:73).

Reports by Jesuit missionaries in 1743 regarding the South Florida Indians indicates the retention of the concept of sacrifice, stating that:

At his [the cacique's] death and that of the other leading men they kill children so that they may serve them in the other life, a cruel ceremony that they practice in the [celebration of] peaces [as well], which we prevented even before we arrived in them by sending a Spaniard in a fishing boat (*cayuco*) with a letter for the cacique, that on Cabo frances [French Cape] we learned they were to celebrate with the Santaluzes [other Indians] (Alaña [1760] in Hann 1991:423).

Missionaries from the 1697 Calusa mission attempt reported seasonal rituals, including the report by López de Velasco who stated that:

...after the summer some shamans (*hichizeros*) come in the guise (*figura*) of the devil with some horns on their head. And they come howling like wolves and many other different idols, which make noises like animals from the woods (*del monte*). And these idols are four months that they never rest neither day nor night that they go running about with great fury. That the great bestiality that they do is a thing to tell about ([1569?] in Hann 1991:316).

Much of the religious knowledge was known only to high-ranking people such as the cacique, priests, shamans, captains, etc. This control of knowledge translated into control of power. Father Rogel in his discussions of Christianity with Calusa cacique, Felipe, discovers that while Felipe believes in an all-powerful creator, Felipe tells him:

...that this was one of the secrets that he and his forebears, the kings, held guarded in their breasts and that they did not communicate it to anyone except to their successors ([1568] in Hann 1991:241).

The control over religious knowledge appears to be an important bulwark to the Calusa cacique's position at the time of European contact. Rogel maintains that commoners were ignorant regarding the cult of the idols beyond what the cacique and head shaman told them

([1568] in Hann 1991:246).

As a result they live in accord with the faith of their betters (*viven in fide maiorum*)... if they ask a vassal what it is that they believe about their idols, he says that he does not know, that his king is the one who knows it. And the same if they ask them about the origin of their idols ([1568] in Hann 1991:246).

Evidence of this secrecy is reported by two shipwrecked Spaniards rescued by Laudonniere in 1564 who stated that the Indians:

...venerated their cacique as other nations did God, for they believed that he caused the abundance of the harvests, and the cacique so represented it. To confirm them in this belief, he could retire at fixed intervals with two or three of his confidantes to a dwelling outside the village, where he could practice magic of various sorts. Of these rites the narrator knew nothing, for if anyone, curious to view them, were to come near, he could immediately be killed. (Barcia [1723] 1970:51).

Legitimacy of the cacique is directly linked to this type of esoteric religious knowledge.

Cacique Felipe explains to Father Rogel his reluctance to immediately accept Christianity by stating that:

...during his childhood they taught and instructed him in all the things it is expedient for the king to know about the cult and veneration of the idols, if he were suddenly to forsake the idolatry at the beginning of his reign, the aforementioned kings and vassals would say that he was not a legitimate king, as he did not know what kings are obliged to know; that for this reason he had forsaken the cult of idols (*que por esso avoia dexado el culto de los idols*) and had received the Christian law (Rogel [1568] in Hann 1991:247-8).

This Calusa political system is intertwined with a religious component which supports and at the same time legitimizes the ruler.

Acceptance of Christian doctrine by the Calusa appears to have been limited to temporary isolated individual occurrences. Father Rogel tells of a councillor of Felipe who struck by illness and appearing to be near death is baptized by Father Rogel. The councillor soon

recovers his health. The missionary tells the councillor that the Christians will continue to clothe and feed him if he discontinues his role in the Calusa religion (Rogel 1568 in Hann 1991:261). Then Rogel talks to Calusa cacique Felipe:

...so that he might free him from all the duties that he had in the house of the idols and so that he would not order him to be involved in anything pertaining to those rites, for he was now a Christian and he promised me that he would do so. And later that same day the shamans (*hechizeros*) were to perform certain sorceries (*hechizerias*) and idolatry. And as this Christian was one of them, he adorned himself after their fashion in order to go there, and as they informed me of it, I sent word to him that he should not do it. Despite this and despite my request to the king, that same day he went to participate in the idol worship (Rogel [1568] in Hann 1991:261-2).

Evident from these descriptions is the sense that the Calusa religion has maintained a position of power within the Calusa culture. Intense personal crisis resulting from illness appears to be one of the few catalysts to prompt a temporary interest in Christianity.

During the second mission effort in 1697, Fray López baptized the old chief who was gravely ill and who had agreed to the baptism. The old chief improved and López continued to instruct him. Soon thereafter, the old cacique was on his death bed. López urged the old cacique to follow the Catholic religion. The old cacique:

...replied that he was not a Christian. And on being confronted with the baptism that he had received, he said that it did not matter a whit; that if he had to be a Christian because of four old rags that they had given him, and that he did not want his body to be lost, but rather that they should bring it to where his ancestors were. And he died within a few days of this obstinacy (López [1698] in Hann 1991:166).

Father Fray Fernando de Samos further illuminates the old chief's responses. He states that:

...when he [López] reminded him of the baptism that he had received and promised to bury him in the church as a Christian or at the foot of the cross, he said that it did not matter [to him], and that he did not want to be a Christian, nor that they should bury him there, where everybody would step

on them, but rather that he wished that his body should not be lost, but that it should be placed instead where the [bodies] of his own [people] were (Samos [1698] in Hann 1991:169).

In his testimony, Fray Miguel Carrillo states that:

...when this witness was asking some Indians on one occasion why they had not advised the religious that a girl was dying, who died without their hearing of it, they replied that [it was] because they had an order from their cacique not to advise them. And that he knew that others had given the same response to other religious. And that the said cacique on repeated occasions told the commissary and the rest of the religious that they should go, that they were all annoyed because their God was annoyed with them because they had received them [i.e., the religious] and kept them there ([1698] in Hann 1991:175).

The Calusa were also willing to rebut the tenets of Christianity.

Father Rogel states that:

...some challenge me also about this truth that God cannot be seen in this world; and they say that they have heard it said by their forebears that they saw God in their burials (*enterramientos*); and that, in order to see him, they fasted for many days and that, while fasting, they ran much; that this is the method that they have for venerating their idols ([1568] in Hann 1991:242).

Perhaps the most extensive description of a Calusa temple and temple mound is a result of mission efforts at Calos, the Calusa capital. Ultimately, it is described as a large building with a mound in the centre that has a mask-filled room atop it. The use of this structure as a focal point of activity provided a ritualistic atmosphere in a space apart from daily activities.

At Calos, Father Rogel reports that:

...[there] was a temple of idols there, which were some very ugly masks, which some Indians donned, delegated by it. And they went out into the village with them. And the wretches performed their worship and adored them, with the women singing certain canticles (*canticos*) ([1607-11] in Hann 1991:287).

A confrontation between the Spanish and the Calusa during a procession of masked Calusa recorded by Rogel was thought by him to be at least a part of the basis for feelings of hostility between Spaniards and Calusa which led ultimately to the abandonment of the first Spanish fort and mission at Calos:

And they even attempted to climb up to our fort to hold a procession (*a dar el paseo*) with their masks, coming from a little hill (*zerillo*), where they had their houses, to the hill (*zerro*) on which our fort was located. Between these hills there was a little valley (*vallecillo*) where they were accustomed to promenade in view of the people with the ceremony and abuses alluded to and the women adorned them and sang their praises, in the sight of whom they put their plan into execution one day. And thus these masked idols climbed up from the valley to the Spanish fort at a time when Father Juan Rogel was at its gate. The latter shouted at them, ordering them not to come up. But they, without paying any attention to him, persisted in climbing up. And then the father called to Captain Francisco de Reinoso so that he might block their attempt. And on going out with a half lance, he hit one of the ones out in front on the head with the butt end and knocked him down. The Indians, when they saw their idol injured in this fashion, became angry and rushed out of their houses with their clubs (*macanas*) and atlatls (*botadores*). But they did not dare to climb up to the fort because now the soldiers were at the ready, and thus coming up of the idols ceased and there was no more mystery than this in that war. And one thing that is certain is that not fifty Indians came out to fight ([1607-11] in Hann 1991:287-8).

The missionaries describe masks hanging on the walls of the temple and worn by the Calusa during ceremonial occasions. Many wooden artefacts recovered from the Key Marco site appear to be a part of the ceremonial paraphernalia of the Calusa culture. In particular several intricately carved and painted wooden masks were recovered as well as wooden figureheads.

Clark (1995) describes fifteen wooden human-faced masks from Key Marco. Masterfully carved and painted, some were adorned with shell inlays or shell plugs as eyes. At least three of these masks exhibit one eye-hole markedly larger with the appearance of having been defaced. Clark feels these three masks may portray people who have lost an eye to the

Calusa god who was said to eat human eyes and to whom the Calusa offered human sacrifices (Clark 1995:121).

Clark (1995) also describes ten of the Key Marco figureheads as well as one animal effigy head found at the Pineland site. The Pineland effigy appears to represent a crane. The Key Marco effigies include representations of the wolf, a falcon, an osprey, a bird of prey, a bear, a deer, an alligator, a crab, and a pelican. Expertly carved from wood, these figureheads illustrate the fine woodworking capabilities of the South Florida Indians. Many had been painted to show the natural markings of the animal portrayed. One of the most well-known artefacts from Key Marco falls within this category -- the deer head (see Figure 22). This artefact showcases the superb quality of woodworking abilities attained by the Calusa. Markings on the deer head have been interpreted as direct symbolism, although by comparing the artefact to an actual Key Deer (see Figure 23), markings naturally found on the Key Deer such as a crescent-shape on the forehead are merely accurate representations of the animal made by the artisan.

Clark emphasizes that the role of figureheads and masks within the Calusa culture was probably a combination of the secular and the sacred. He states that:

...we are dealing with sacred objects of religious and political importance in many of the finely carved and painted masks of Pineland and Key Marco. But the masking traditions of Southwest Florida no doubt also fulfilled the human need for play, entertainment, and creative expression (Clark 1995:194).

Also of the most well-known artefacts from the Key Marco site is a statuette of a kneeling feline figure (see Figure 24). Descriptions of Mayan beliefs concerning shamans undergoing

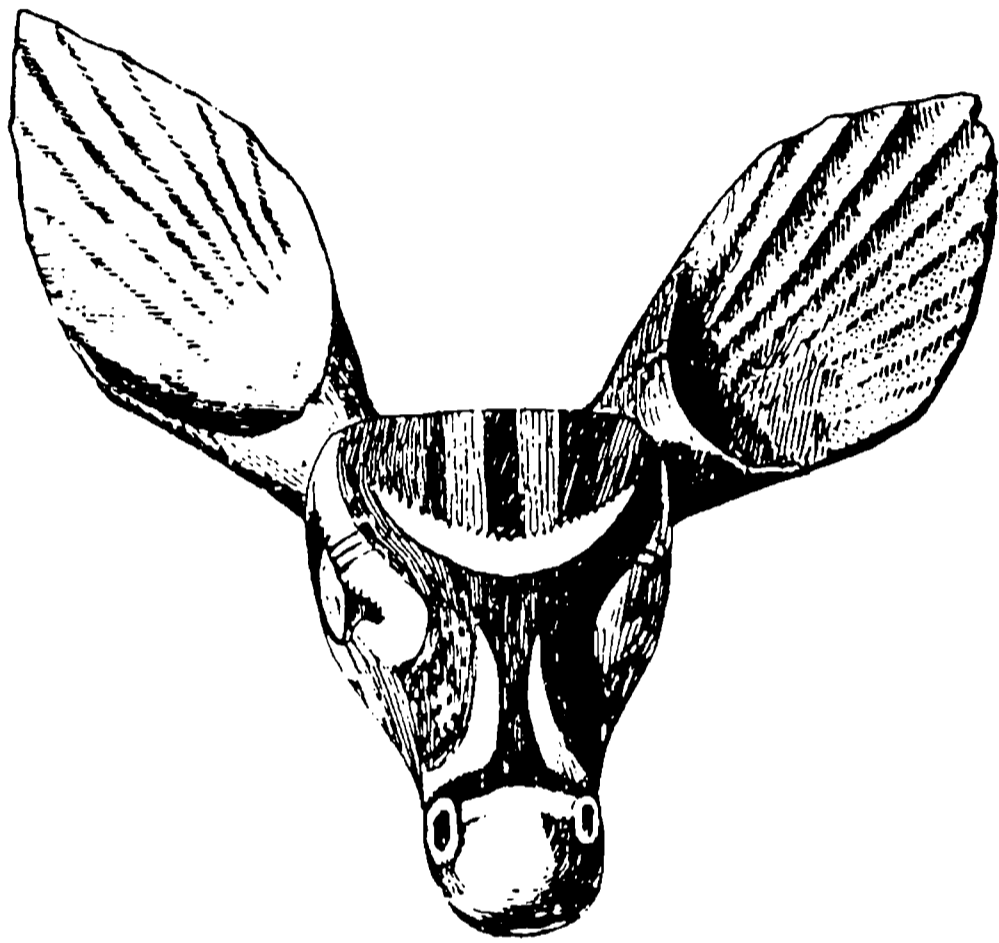


Figure 22. Key Marco Deer Head
(Illustration by Wells Sawyer in Cushing [1896]1973)

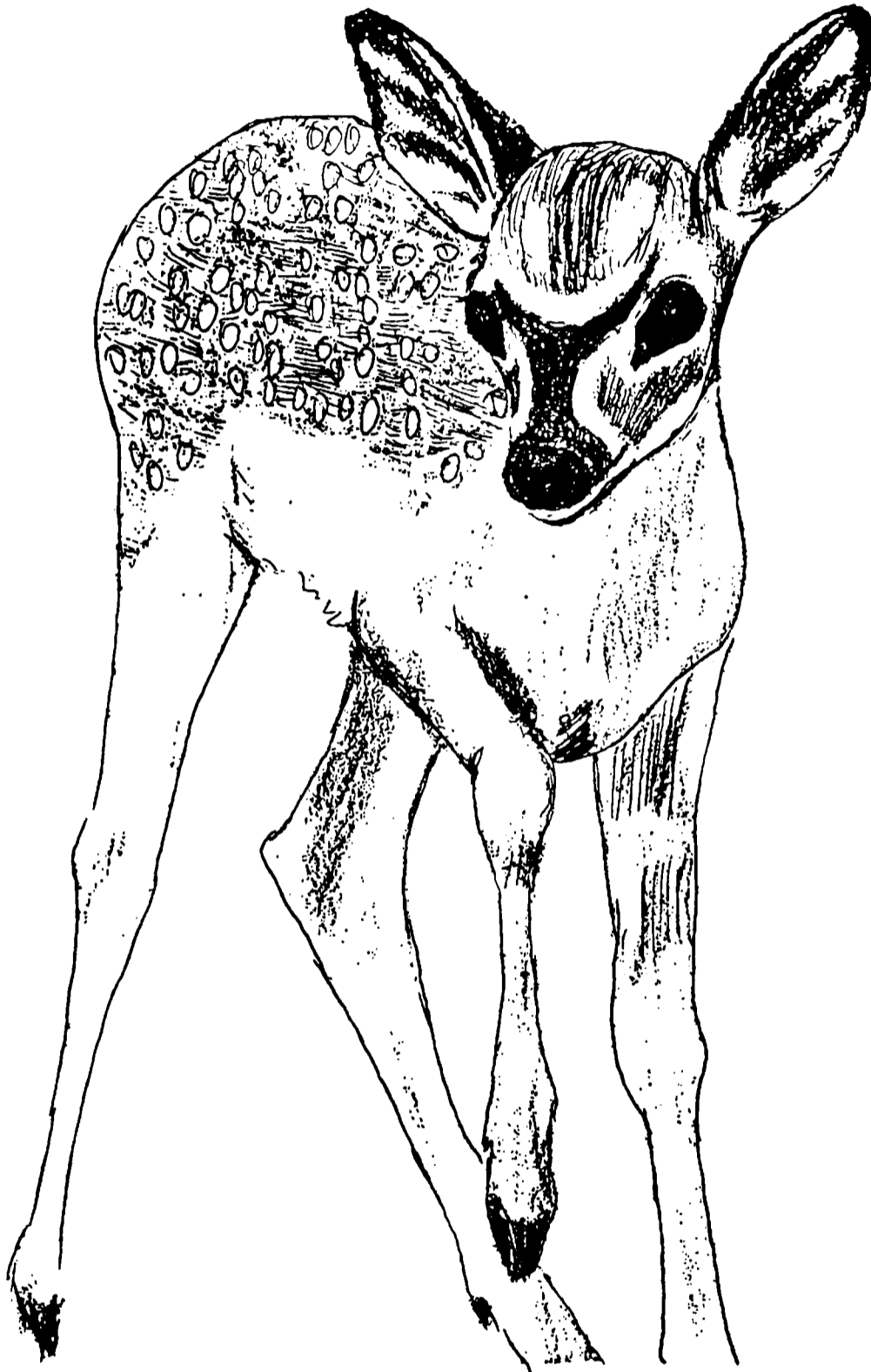


Figure 23. Key Deer (Illustration by Laura Linville)

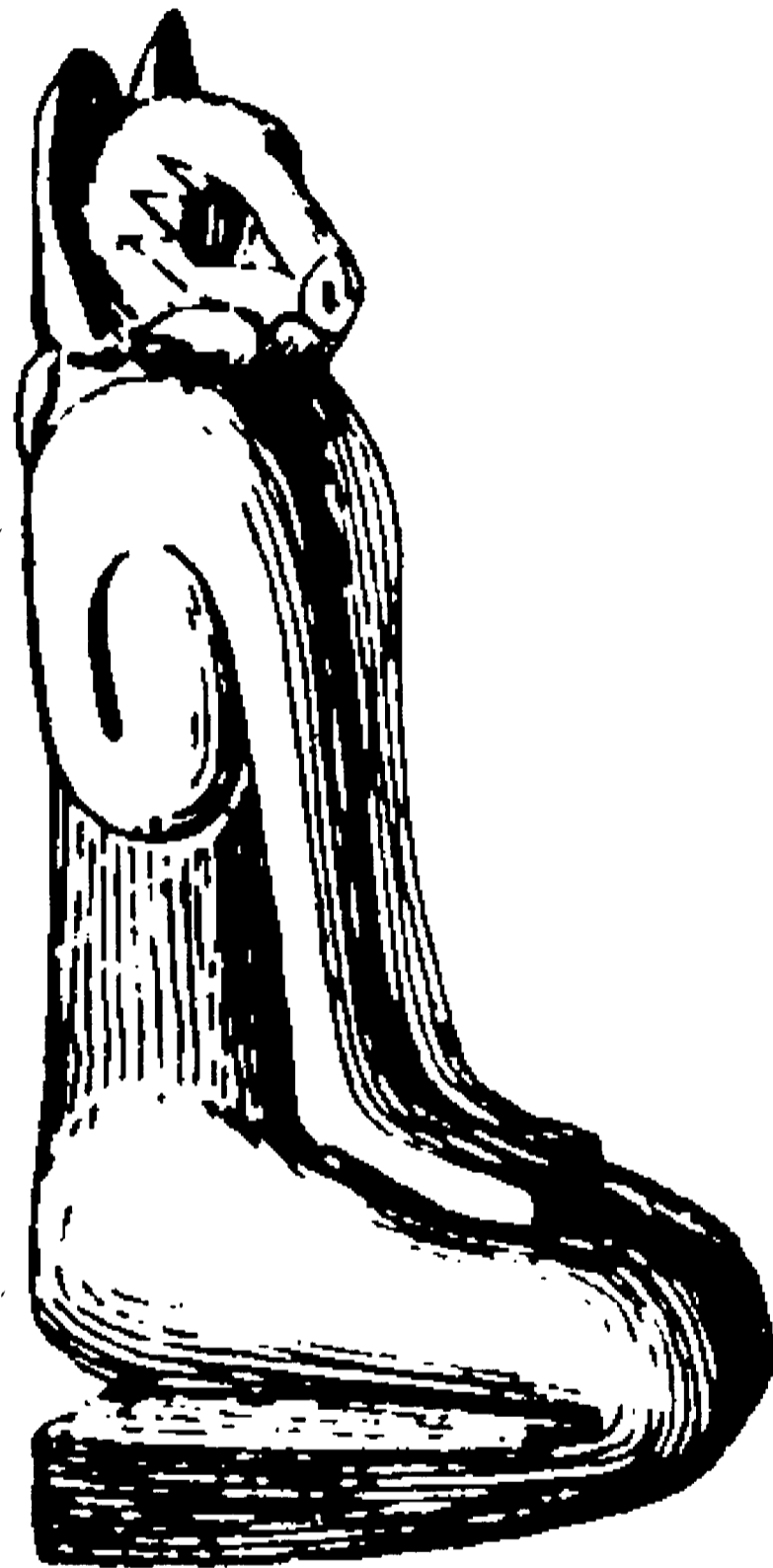


Figure 24. Calusa Cat
(Illustration by Wells Sawyer in Cushing [1896] 1973)

transformations into animal spirits and Mayan artefacts depicting these transformations are compelling in their similarities to the feline figure found at Key Marco. Whilst this may not be a result of Mayan contact, the possible parallels may be instructive in our understanding of this particular artefact and Calusa beliefs in shamanistic powers.

The Black Drink

The roasted leaves of the yaupon tree were used by the Southeastern Indians to brew what was called by Europeans “the Black Drink.” The Black Drink is believed to have developed early in the prehistory of the Southeastern U.S. (Milanich 1994:117). Within Florida and throughout the Southeastern U.S., *Busycon* shell cups have been discovered within mounds and are believed to be associated with the ceremonial use of the Black Drink.

The yaupon tree was central to the concept of spiritual purity and was probably used by the Calusa just as it was commonly used by many Southeastern Indians. *Ilex vomitoria* or the yaupon is an evergreen tree or shrub growing to 12-15 feet and is found in moist and shady places, ranging from Virginia to Florida (Gifford 1944:38).

The leaves of the yaupon contain a high amount of caffeine and when prepared as a tea called cassina tea, the Southeastern Indians used it to induce vomiting and as a laxative (Little 1995:565). The availability of the yaupon tree is limited to coastal areas and may have provided the coastal Florida Indians with an important trade item to interior Indians in the Southeast (Griffin 1996a:172).

Bartram in his travels through Georgia, North and South Carolina, and Florida in the 1770s

states that:

...the Indians call it the beloved tree, and are very careful to keep it pruned and cultivated: they drink a very strong infusion of the leaves, buds and tender branches of this plant, which is so celebrated, indeed venerated by the Creeks and all the Southern maritime nations of Indians (Bartram [1791] 1955:291).

Gifford states that:

It is said that the yaupon was regarded by many of the southern tribes of the American Indians as a holy plant, being used by them during their religious rites and solemn councils, to clear the stomach and the head. It was an annual custom for a chief to give notice to the inhabitants of a town, in the spring, to assemble at the public house, which was previously purified by fire. After they had convened, the chief was first served with a bowl of conch-shell -- never before used -- of their emetic broth, and next to him were served each individual until at last the women and children. They had a belief that this beverage restored lost appetite, strengthened the stomach and gave them agility and courage in war (Gifford 1944:38).

The use of the Black Drink throughout the Southeast has led to its inclusion in the Southeastern Ceremonial Complex (SECC). It also represents a long-term tradition for which there is evidence of both prehistoric and historic use.

Additionally, the use of *Ilex guayusa* during late prehistoric times in highland Bolivia suggests an even wider tradition. Donald Lathrap states that a complex, long-established trade relationship between Bolivian highlands and the Amazon Basin resulted in the transport of *Ilex guayusa* leaves from the basin to the highlands for use in the manufacture of a high-caffeine content beverage (Lathrap 1973:181).

By A.D. 350, Lathrap feels that *Ilex guayusa* was under production in the Amazon basin for trade purposes. Trade was critical for survival in the basin where there was a lack of certain resources. Sometimes trade extended over 1000 miles in the acquisition of these resources

(Lathrap 1973:170-3).

Future research into the use of an *Ilex*-based caffeine drink in South America in connection with the SECC may reveal cultural interaction. Without additional data presented here this can only be considered conjecture. But with common trade routes topping 1000 miles, it seems reasonable to conclude that greater distances could and probably were covered via trade activity -- especially when water routes are considered. Access to the Amazon River which empties into the Atlantic provides a simplistic route to the Lesser and Greater Antilles.

Over one hundred years after the first mission effort, Fray Feliciano López, superior of the second Calusa mission (established in September of 1697), and his colleagues provide descriptions of the Calusa using their temple building. López states that:

While examining the village because of having heard much celebration on the preceding night, and not seeing anything more than a house (*Casa*) in the area where I heard them, they say [it is] the house of *Mahoma*, and when I was most unprepared for it, all the Indians came running and yelling (*hipando*) so that I reckoned that my hour had arrived, but I took it as a joke, making them think that I had not seen it. And as they saw me in celebration they themselves showed me everything. It is a very tall and wide house with its door and an *abujero* [hole?], in the middle a hillock (*cuesta*) or very high-topped mound (*mogote*), and on top of it a sort of room (*aposeno*) [made] of mats (*esteras*) with seats (*barbacoas*) all closed. One can imagine the purpose it serves. They dance around it. The walls are entirely covered with masks, one worse than the other. The cacique [has] given his word to me that we may destroy the house, but by my poor understanding, they are opposing it. May God help me and give me his divine assistance as, at this date, I am much afflicted ([1697] in Hann 1991:159-160).

In testimony given in 1698 to Fray Francisco de Contreras, vice-commissary general, Juan Esteva, a seventeen-year-old youth and assistant to the five friars to the Calusa states that:

...they engaged in their idolatries in a hut apart, where there are many wooden masks, painted in white, red, and black, with noses two yards in length and where they go every three nights and they keep these masks above (*sobre*) a type of altar with a mat (*estera*) in front of it in the fashion of a frontal ([1698] in Hann 1991:195-6).

Undaunted, three of the missionaries under the instruction of López approached the Calusa temple. Fray López describes the night of October 18, 1697, one month after their initial arrival in Calusa territory:

...having learned that the Indians were at the place where they had the idols and where they venerate them, three of the said religious...went to the said place to dissuade them and withdraw them from those idolatries. And on seeing them all the said Indians fled ([1698] in Hann 1991:167).

Juan Esteva, the youthful assistant to the friars in 1697, provides a fuller description of this first attempt by the missionaries to confront the Calusa at their temple:

...the said religious, in order to see whether they could bring them around, went out at night praying the rosary, one wearing a surplice and stole, the most holy Virgin in his hands, two with their lanterns (*linternas*), and the one testifying [Juan Esteva] in front with a cross, with the other two religious remaining behind to guard the house. And saying the rosary in this form, they even managed to enter into the said synagogue with the novelty of the lanterns the Indians fled without anyone appearing, and that for five or six days they left off going to the said synagogue; and at the end of them they returned ([1698] in Hann 1991:196).

Juan Esteva states that a second trip to the temple by the missionaries was undertaken after the Calusa returned after five or six days hiatus following the missionaries' initial approach to the temple. This specific visit is recounted only by Juan Esteva who states that:

...the religious went out again that night in the same way as on the first one, with the deponent [Juan Esteva] saying the rosary. And all the Indians were inside the synagogue already furnished with arrows; with the result that, when other Indians had detained them so that they would not go to the said synagogue because they would have to kill them. This incident of having encountered the said Indians and that they had detained them happened

because of the miracle of the most holy Virgin, because when the said priests continued to head toward the said synagogue, despite the fears that the others [the Indians who detained them] instilled in them, they did not find any Indian in it ([1698] in Hann 1991:196).

On the night of October 26, 1697 the missionaries again approached the Calusa temple while the Indians were engaged therein. This time, the Calusa were prepared to repulse them.

López recounted that when the religious insisted on going on forward, the Indians

...before they reached it, they [the Indians] came out on to the trail armed to block their coming. And when the religious insisted on going forward, the Indians seized them and brought them back to the house, carrying them, having mistreated them with some blows. And the religious having retreated and applied themselves to sowing a jug (*botija*) of wheat, the Indians did not cease to bother them, nettling them so that they would leave and telling them on repeated occasions that they would ship them off, as in fact they did on the second day of December ([1698] in Hann 1991:167).

Father Fray Fernando de Samos' recollection concerning their final approach to the Calusa temple was that:

... a short distance from the said house the Indians armed with darts (*dardos*) and arrows sallied forth to block passage and that with the religious insisting on going on and the Indians on resisting, [alerted] by the uproar the said father commissary, who had remained in the house, came out, telling them that they should let the said religious pass. And when he made a lunge in an effort to go forward, an Indian grabbed him and put his hand over his mouth as if with the intent of wanting to suffocate him, but that he was able to free himself from him, and on his going forward another one picked him up and brought him to where the other religious were, and at this time they also picked the others up with violence and ill usage and brought them to the house ([1698] in Hann 1991:170-1).

Juan Esteva's description of the final attempt by the missionaries to approach the Calusa temple results in the Calusa shoving the missionaries back again to the Spanish house ([1698] in Hann 1991:197). Esteva states that:

...when the priests set out for it to continue their rosary, and after going halfway on the trail and before they reached the said synagogue, the young chief and other leading Indians came out to the said priests and sought to

dissuade the said priests from going to the synagogue because they would have to kill them; and the said Indians, grabbing hold of the priests, with two or three [holding] each one, the father commissary, Fray Feliciano López, who had remained behind, guarding the house, provisions, and ornaments, on hearing the noise, went to where the religious [and] the deponent were going along saying the rosary and the Indians who were detaining them. And after incorporating himself with them, he told him that he should proceed with the rosary. On seeing this resolution, the young cacique ordered all the Indian bowmen sent for. And in a short time a great number of them assembled with their arrows and with the said young cacique ordering them that, if the priests should step off the trail, they should kill them. And the said Indians aimed at them with the said arrows, but they never fired them. And when some of the religious approached them, they pushed them back to their house with shoves and blows to the throat. And the deponent brought an Indian along with him, who had grabbed him by the throat. And they broke off [the engagement] with the priests in their said house ([1698] in Hann 1991:196-7).

The Calusa had no intention of abandoning their native religious beliefs. Whilst the missionaries plan the destruction of the Calusa temple, two leading Indians warn López to:

...withdraw inside and remain at home with my friars because their Holy One (*su Santo*) was very irritated. And when I told them that my God was more powerful than their Holy One, they told me not to jest [and] that I should take care how I proceeded... And it appears to me that on the first next occasion that we return to the house of their superstitions, they will knock us down (López [1697] in Hann 1991:160).

After approaching the Calusa temple, the following day, the great captain, brother of the cacique, warned López that the Calusa would kill them if they tried to return to the temple when the Indians were there. The great captain told López that the Calusa believed their god to be angry that the Spanish were living there amongst the Calusa and had been allowed to remain by the Calusa (López [1698] in Hann 1991:167).

The third and final mission effort to convert the Calusa Indians to Christianity occurred in 1743 and was an outreach to South Florida Indians at a time when North Florida Indian

numbers were dwindling. The Jesuits found three small native groups living near the mouth of the Miami River.

Descriptions of aboriginal religion appears to reflect the assimilation of Spanish religious concepts, but it seems more likely that instead, the native Floridians appropriated Spanish concepts to benefit from them. The Jesuit missionaries report that:

They have an Indian whom they call bishop, consecrated with three days of races. He drinks many times until he passes out. And they think that such a one dies and returns sanctified (Alaña [1760] in Hann 1991:422).

The Jesuit missionaries report that the South Florida Indians at the mouth of the Miami River in 1743, "...venerate the cacique and his sons with incensings (*sahumerios*) in which the bishop takes part" (Alaña [1760] in Hann 1991:423). The "bishop," then, appears to be a position of head priest for this community and suggests the appropriation of European religious categories and thereby, the appropriation of European power.

Of the multi-cultural society at the mouth of the Miami River in 1743, the Jesuit missionaries state that:

There is another Indian whom they call *tirupo* or like God, terms that are synonymous for them, whom they consult concerning the future and the distant. He is considered to be the doctor for the place. His remedies are great howls (*aullidos*) and gestures (*ademanes*) that he makes over the one who is ill, adorning himself with feathers and painting himself horribly. And he is indeed a man who has in his appearance (*aspecto*) I do not know just what traces of [being] an instrument of the Devil (Alaña [1760] in Hann 1991:422-3).

The Jesuit missionaries in 1743 encountered various religious beliefs of the multi-cultural society found at the Miami River which reportedly included Calusa. Father Joseph Javier Alaña reports that the Indians held firmly their own religious beliefs, stating:

We saw two idols. The principal one is a board sheathed in deerskin (*aforrada en gamusa*) with its poorly formed image of a fish that looks like the barracuda (*qe parese se la Picuda*) and other figures like tongues ([1760] in Hann 1991:422).

Of the South Florida Indians living at the mouth of the Miami River in 1743, Jesuit Father Alaña states that, “The men paint themselves variously almost every day, a custom they practice, we have learned, for the honor of the principal idol that they venerate...” ([1760] in Hann 1991:424).

The Indians believed that disrespectful behaviour towards this primary idol would result in disaster ([Alaña] 1760 in Hann 1991:422). Alaña continues:

The other idol, which is the God of the cemetery, the theater of their most visible superstitions, was a head of a bird, sculptured in pine, which in the matter of hideousness well represented its original, and which we burned after it had been smashed along with the hut (*choza*) that they had for a church, when it appeared to us that it could be done without a tumult on the part of the Indians, as proved to be the case, although not without many signs of grief and even lamentations and tears from their women. In the said church they had the most ugly mask destined for the festivals of the principal idol, which was placed there on top of a table (*mesa*) or altar. And they call it *sipi* or *sipil*. ([1760] in Hann 1991:422).

Alaña states that:

We also saw a large log (*palo largo*) which, on certain days, they adorn with flowers and with feathers and celebrate, at the foot of which some silver had been buried that the Indians removed ([1760] in Hann 1991:422).

Social Stratification

In the 16th century, the Spanish reported a socially stratified Calusa culture comprised of various classes. The material culture of South Florida may offer some hints at the use of material culture in social hierarchy.

The earlier Hopewellian-influenced imagery on small stone tablets and wooden effigies in South Florida predate later Calusa-related designs and motifs, but early forms continue to be utilized. The earlier stone tablets appear to illustrate avian imagery with an owl design, reflecting Hopewellian symbolism (Wheeler 1996:58-61). There are only a small number of stone tablets which have been found in the extreme southwestern coastal area of the Florida peninsula, including the Florida Keys (Allerton *et al.* 1984:7). Each of the stone tablets appears to contain similar style elements. Previous interpretation of the stone tablets has been somewhat vague, although believed to represent an animal through a stylized art form. Figure 25 illustrates four of these stone tablets. Based on limited data, the temporal association of these artifacts is thought to be *ca.* Glades III or possibly also Glades II period (A.D. 1000 -- 1513). Wheeler definitively places them within a Hopewell context (Wheeler 1996:50-56). In addition, both non-local and local stone was used in their manufacture (Allerton *et al.* 1984:9, 22, Wheeler 1996:50-56).

Allerton *et al.* note that the generally common design elements of the stone tablets include ovals or circles in pairs which suggest "eyes," a medial separation, and a triangle (Allerton *et al.* 1984:20). Of the non-tenoned half of the tablets, these authors conclude that they, "...represent a zoomorphic design. This motif is not typically Mississippian and is expressly a Florida innovation" (Allerton *et al.* 1984:22). These stone tablets have been variously described as representing alligator effigy plummets or duck or spoonbill effigy plummets (Wheeler 1996:57).

By orienting each of the stone tablets with the tenon-edge to the bottom of the page, a potential overall design image emerges. So positioned, with eye features located in the non-

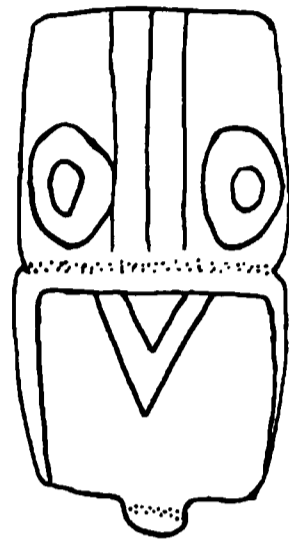
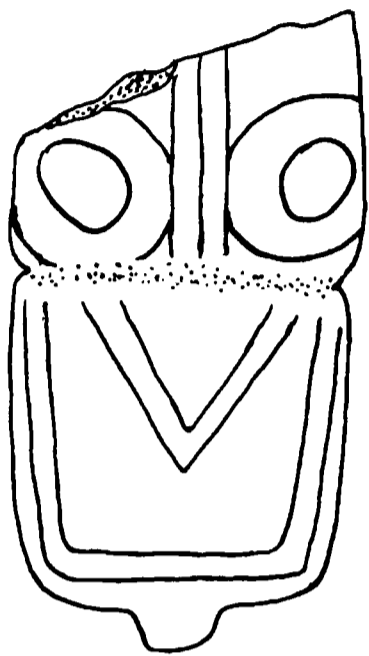


Figure 25. Stone Tablets from South Florida

tenoned or rounded half of the tablet, the tenoned half in many instances contains a triangular "beak" feature. The rounded or convex non-tenoned half may represent the spherical shape of the a head in contrast to its body. Although somewhat stylized, an avian image appears to occur in a fairly straightforward manner. The overall appearance also appears to suggest an owl image.

If presumed to represent an owl, this avian image contains possible symbolic meaning within a South Florida cultural context. The owl image can be traced back to the Poverty Point complex which peaked ca. 1000 B.C. Red jasper stone was used to make carved owl "amulets," one of which has been recovered from the Withlacoochee River in Florida and appears to have been manufactured at the Poverty Point site based on its art style. Carved stone tablets appear to have been introduced during the Adena culture. In addition, avian imagery occurs commonly in Adena-Hopewell as well as SECC contexts. Clearly, then, there is a greater overall pattern that has emerged through time that reflects the use of both avian images and stone tablets within the Southeastern U.S.

Within a Hopewellian context, Wheeler states that, "Birds and other zoöomorphic figures are related directly to mortuary ceremonialism" (1996:61). Characteristics associated with owls make a compelling case for links to mortuary ceremonialism. The owl is a nocturnal bird, making it different from most birds. In addition, it preys on mammals such as rodents. Finally, after consuming a rodent meal, the owl then regurgitates the bones and fur of the rodent, leaving only a piles of bones and fur below its nest. When examining this behaviour of the owl, an argument might be made for the use of the owl to represent mortuary ceremonialism. As the Glades culture developed, there was an increased interest in the

disposal of the dead that resulted in charnel houses and secondary interments. Ultimately, the charnel keeper's role might be similar to that of an owl where nocturnal awareness is important in the safekeeping of the remains and the removal of the flesh from the bones the task of the charnel keeper.

The roots of this imagery may be found in Hopewellian expressions in Florida. Widmer views the SECC in Florida as the result of a lingering Hopewellian influence on Florida.

With respect to Hopewellian manifestation in Florida, Wheeler comments that:

An emphasis on avian imagery is strong and provides a basis for much of the bird symbolism found in later expressions of the Glades and Weeden Island traditions, especially the spoonbill or shoveler duck form.... These common forms and images suggest shared patterns of ritual and artistic organization at levels deeper than the outward manifestation of mound construction, mortuary ceremonialism, and personal adornment (Wheeler 1996:62).

Whilst many personal adornments seem to be merely decorative in function, they may also convey information. At Key Marco, Cushing found wood ear buttons, wood and shell ear buttons, shell beads, bone beads, bone pins, shell gorgets, columella pendants and stone "plummets," all of which may have been worn as ornaments and may also have given social information about the status of the wearer.

Bone pins which are thought to have been worn in the hair, may soon provide researchers with clues to social groupings. Wheeler and Coleman classify carved and engraved bone pins by design motifs and note the coexistence of design systems within southern and eastern Florida during the Mississippian Period (1996:61).

Warrior

The warrior class cross-cut vassal villages so that when summoned, hundreds of Calusa warriors could be quickly assembled. Upon Menéndez's first contact with the Calusa, 300 Indian archers appeared the day following the Spanish arrival (Solís de Merás [1566] in Connor 1964:141). The use of metal crested-woodpecker ornaments is believed to be associated with the warrior status.

Presently, there are nine known metal crested-woodpecker ornaments (for one example, see Figure 26). All have been recovered from the Calusa area of influence, including one from Mound Key (see Figure 27). Wheeler (1996b:78) points to SECC symbolism of the woodpecker as a symbol for warfare to suggest that,

...the crested-woodpecker ornament served as an emblem or insignia of a specific military rank or office. Such offices existed among the Indian tribes of Florida, and probably were partly hereditary, partly ascribed (Wheeler 1996b:79).

The relative rarity of this artefact in the archaeological record supports the concept of limited use, and the peripheral link of South Florida to the SECC also supports Wheeler's conclusion.

Protohistoric use of the crested-woodpecker design is found on artefacts recovered during Cushing's 1896 excavations at Key Marco, including a painted plaque believed to represent an ivory-billed woodpecker (Gore 1995:194-199). Closely resembling the woodpecker plaque is a wooden crested-woodpecker effigy which is approximately 2 feet 3 ½ inches long and 10 inches wide (See Figure 28) which was also recovered from Key Marco. The elongated triangular-shaped bill, striped feathers, and apparent crest are all characteristics

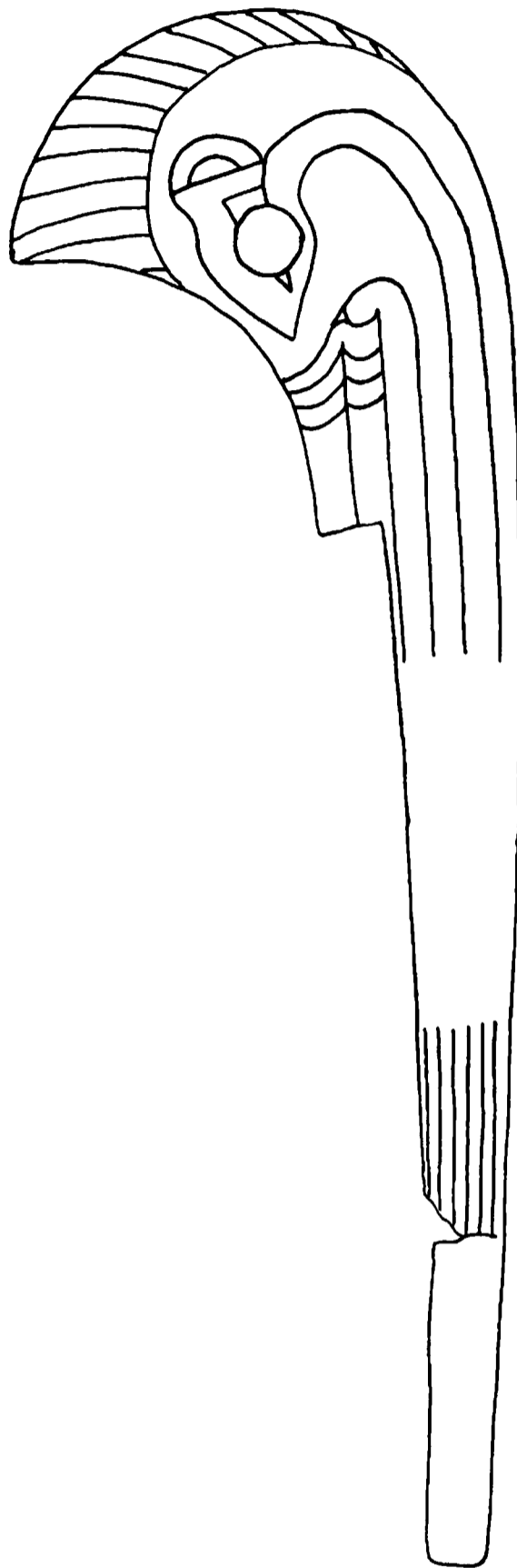


Figure 26. Metal crested-woodpecker
(illustration by Laura Linville).

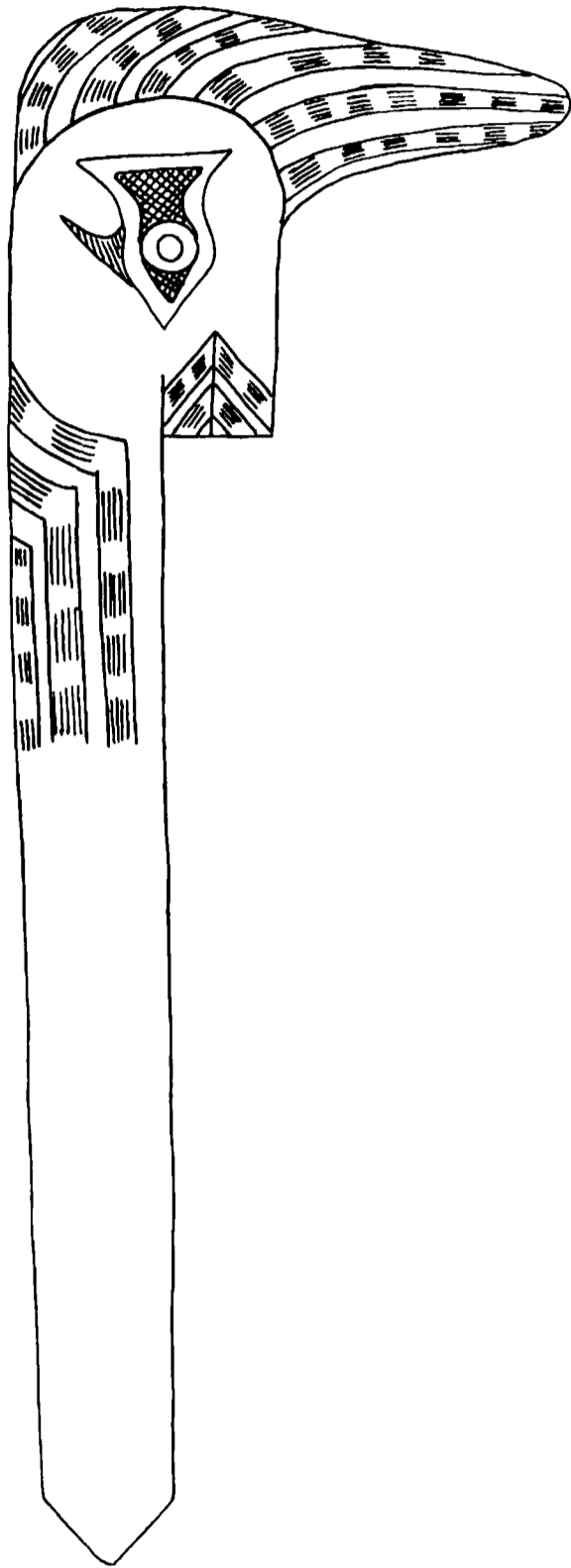


Figure 27. Mound Key Metal crested-woodpecker
(Illustration by Laura Linville)

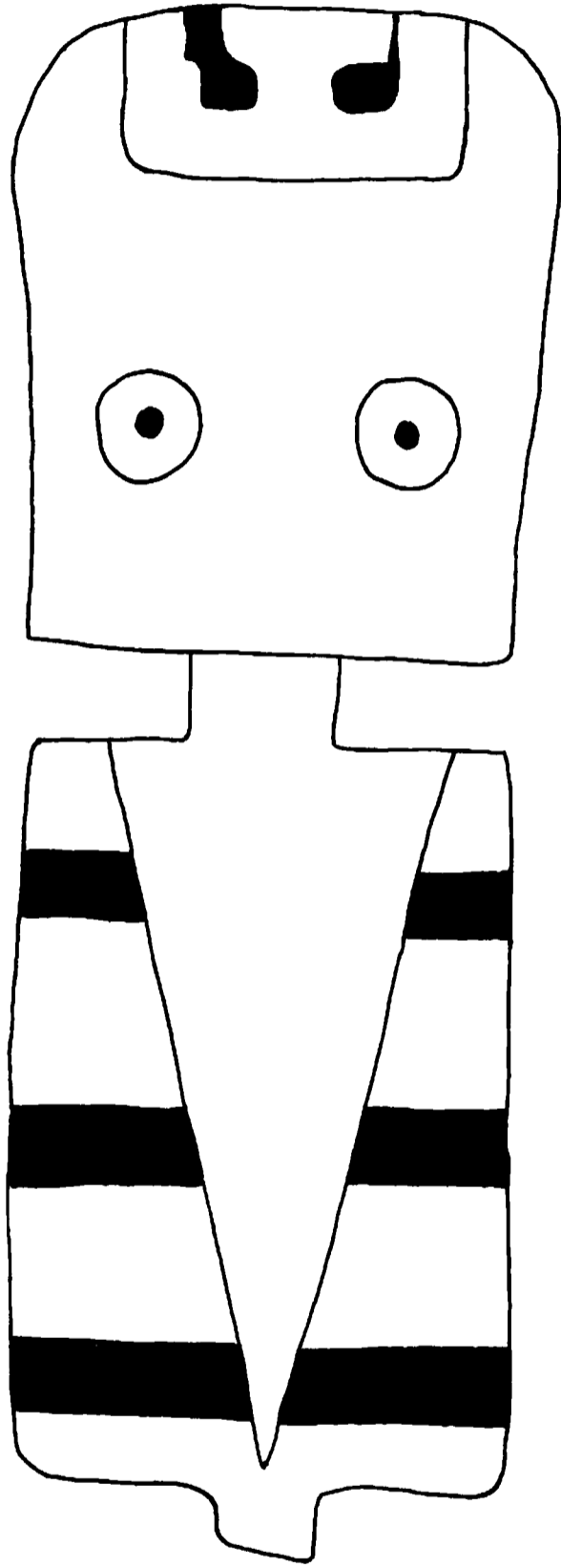


Figure 28. Wooden Woodpecker Plaque

of the ivory-billed woodpecker. Important to notice from this wooden woodpecker effigy is the crest component which appears later in iconography utilized within the Calusa culture. Additionally, the location of a tenon on the lower portion of this woodpecker effigy as well as the previously discussed stone owl tablets may provide a clue in our understanding of metal tablets (discussed below) and their proper orientation for interpretation.

Chief

The cacique and his family belonged to the most powerful class. The Calusa chief or *cacique* was, in the eyes of the Spanish chroniclers, the most powerful position in Calusa society. Alliances between the Calusa cacique and vassal settlements were considered important in power brokering. The Calusa chief solidified alliances through marriage -- vassal villages sent leading women to become wives to the Calusa chief (Hann 1991:193). The Calusa also practised sibling marriage which would have served as a vehicle to magnify the power of the ruling family (Hann 1991:193). But at least in historic times, the power of the cacique appears to have been unstable:

...Spanish accounts show that in the 1550s and 1560s the system possessed a potential for instability when a leader's shortcomings or other factors created dissatisfaction with his rule. During that era, two successive rulers faced challenges from their own people before they were deposed and killed by the Spaniards (Hann 1991:193).

In contrast to agriculturally-based societies to the north, the Calusa were patrilineal and the Calusa chief practised sibling marriage. The material culture surrounding the cacique illustrates an exhibition of power.

Certain foods were reserved only for the cacique and other principal people. Fontaneda reports that, "Some eat sea-wolves; not all of them, for there is a distinction between the

higher and the lower classes, but the principal persons eat them” (Fontaneda [1575] in Smith 1973:25).

A description of the chief’s house at Calos is given by Solís de Merás who states that:

The cacique’s house was about two arquebuse shots from where he landed, and 2,000 men might gather therein without being very crowded....

He [Menéndez] entered the cacique’s house alone, with about twenty gentlemen, and stood where there were some large windows, through which he could see his men: the cacique was in a large room, alone on a [raised] seat with a great show of authority, and with an Indian woman also seated, a little apart from him, on an elevation half an *estado* from the ground; and there were about 500 principal Indian men and 500 Indian women: the men were near him, and the women near her, below them (Solís de Merás [1566] in Connor 1964:146).

The use of a wooden bench or platform by the cacique is repeated throughout Spanish documents of this period. During the first mission effort, Father Juan Rogel reports that the Calusa cacique engaged in early morning meetings with his people to discuss their thoughts on the Spanish and at which the cacique was “...seated on his bench or platform” ([1568] in Hann 1991:242-3). This bench served to elevate the cacique above the commoners and lesser personages.

The use of a wooden bench appears to have been common in the New World. Columbus reports that the natives of Cuba greeted the Spanish and:

...made them sit down on some strangely shaped wooden seats in the form of animals with short fore- and rear-paws and tails slightly raised to support the back. For comfort this back support was as wide as the seat, and on the front was carved a head with eyes and ears of gold. They call these seats ‘dujos or duchos’ (Bartolomé de las Casas in Cohen 1969:78-9).

Wooden stools or dujos were also used by the native cultures of the Lower Mississippi River

Valley and resemble those found in Florida and the West Indies. Swanton notes that this use of dujos by the Lower Mississippi River Valley cultures reported during the De Soto Expedition suggests that any introduction from the West Indies occurred before Contact (Swanton 1987:555-6). The use of dujos effectively separated the chief from his subjects and reinforced the established social hierarchy.

Other material culture believed to be associated with the ruling classes are metal tablets (see Figure 29). Several metal tablets have been recovered in burial contexts in the Calusa area of influence. These appear to date to A.D. 1500 -- 1770 based on associated European goods (Allerton *et al.* 1984:10). Their exact use is unknown although it has been hypothesized that they were pendants which hung around the neck or that they were used within a headdress or against the forehead. In 1568, Father Juan Rogel reports that a royal insignia of gold worn on the forehead was associated with the position of the Calusa cacique ([1568] in Hann 1991:268).

Because these tablets were made of European-derived metals, they postdate the impacts of European goods on the Florida aboriginal economy and are contemporaneous with the appearance of metal crested-woodpecker ornaments (thought to be associated with warrior status). Marquardt suggests that, "The Calusa chief controlled the salvage of Spanish metals (Laudonniere 1975:109-110), and it may be that the medallions were presented to town chiefs to reinforce the bonds of sacred trust and relations of patronage/clientage" (Marquardt 1992c:431). Based on the recovery of these tablets throughout the Calusa area of influence, this suggestion seems reasonable (Marquardt 1992c:431-2). Widmer believes these metal tablets were originally provided by the Spanish to South Florida chiefs in order to enhance

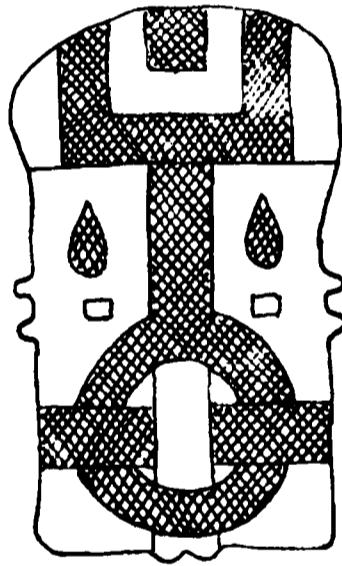
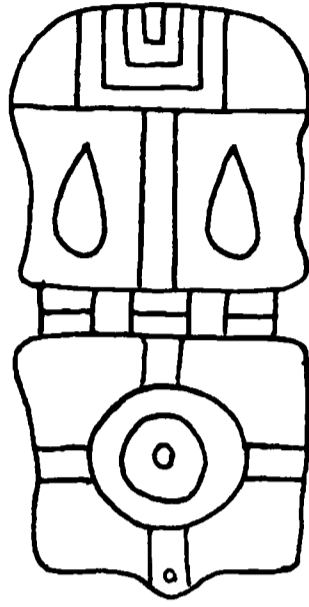


Figure 29. Metal Tablets

their chiefly power and confirm a supportive relationship with the Spanish (1989:179).

The designs on these tablets of silver, gold, and copper have been difficult to interpret. Allerton *et al.* (1984) have identified design elements in common amongst these metal tablets. The authors summarize past interpretations of the design elements and suggest that the cross-and-circle motif is related to the SECC cross-and-sun-circle motif (Allerton *et al.* 1984:16-22) and interpret the remainder as a zoomorphic design.

In analysing these metal tablets, Wheeler proposes that, “The metal tablets appear to be the endpoint in a continuum of related avian and zoöomorphic imagery, specifically that of the spoonbill” (Wheeler 1996:317). Wheeler looks to earlier imagery and believes the later use of a possible spoonbill motif reflects an effort to appropriate the power of earlier zoomorphic design tradition (Wheeler 1996:317-9).

By reorientating our perspective of these metal artefacts, a different interpretation of design elements can be made. Placing the tenon of each metal tablet along the lower edge effects this reorientation and also has precedent in the analyses discussed earlier for the stone tablets which appear to represent owls and for the wooden woodpecker effigy.

Overall, my hypothesis is that these metal tablets portray a chiefly, powerful countenance. The representation of the crest of the woodpecker as shown in Figure 28 appears to recur on these metal tablets. This “crest” shown as concentric U-shaped lines appears to represent a stylised headdress or “mohawk” hairstyle. The teardrop designs appear to represent eyes as noted by Allerton *et al.* (1984). The side lugs may portray ear decorations. The central

holes may represent nostrils whilst the circle-and-cross motif may represent a mouth. If the circle-and cross motif also represents the four cardinal directions, it may reflect the power of the individual represented who controls the seasons.

The reverse of these metal artefacts often includes crescent designs. These crescents are suggested by Allerton *et al.* to represent the lunar cycle (1984:22). The crescent design recurs frequently, particularly evident on the wooden trays recovered from Key Marco. Whilst it is possible that the crescent represents the lunar cycle, I would suggest that the meaning of the crescent design is linked to prestige or a social status within the Calusa culture.

Furthering the social hierarchy was the relationship between the Calusa chief and vassal villages who were required to give tribute to the Calusa chief. In 1568, Father Juan Rogel states that tribute to the Calusa cacique included feathers, mats, fruits, and other foods ([1568] in Hann 1991:237).

The priestly class of the Calusa would likely be represented in the masks and figureheads recovered at Key Marco. During processions, objects like these were used in the veneration of their idols. Other classes are more difficult to cull from the archaeological record until more investigations take place in Southwest Florida.

Burial mounds may have played a role in magnifying, strengthening, and enforcing social hierarchy within the Calusa culture. Within strongly stratified social structures:

A mound produced as part of such mortuary ceremonies would then be, in

effect, a concrete memorialization of not only the mortuary ceremonies but of the social structures of which the ceremonies were a partial reaffirmation (Sears 1958:279).

Sears provides a broad, general overview of differences in mortuary patterns seen within the Gulf Coast where the western Gulf Coastal Plain and northwest Florida appear to illustrate more definitive examples of strong social stratification than the central or southern Gulf Coast of Florida.

Calusa Burial Pattern

The use of sand burial mounds and sand ridges as burial locales by A.D. 500 occurred in the Calusa “Heartland” (Marquardt 1992c:430). It is possible that sand burial mounds were precursors to the intentional construction of shell mounds as monuments. After A.D. 1000, special mortuary ceramic wares began to be included in burials (Marquardt 1992c:431).

Calusa mortuary patterns appear to be based on the construction of separate sand burial mounds as well as individual burials within a shell midden context. The historic records indicate that burial occurred a distance from the village. To date, there is only a limited amount of data concerning burials. But the continuous use of sand burial mounds solely for the interment of the dead suggests a long-term importance in such features.

Summary

In attempting to outline a blueprint of the Calusa culture, more than one obstacle arises. The dynamic nature of culture results literally in a “moving target.” Added to the equation of constant change is the variety of ways in which material culture is moulded by cultural participants. The study of material culture in archaeological studies in an effort to establish

boundaries of culturally-related people in time and space, then, is fraught with peril.

Therefore, any understanding of the Calusa in terms of specific material culture traits must respect the fact that:

...material culture is actively structured and structuring throughout its social life, and consequently its meaning is not fixed but constantly subject to reproduction and transformation. As Shanks and Tilley (1987:97) have indicated, a particular material form may remain the same, but its meaning will alter in different contexts; it will be 'consumed in different ways, appropriated and incorporated into various symbolic structures according to historical tradition and social context.' On this basis it cannot be assumed *a priori* that similarity in material culture reflects the presence of a particular group of people in the past, an index of social interaction, or a shared normative framework (Jones 1997:126).

As a result, interpretations of the Calusa Culture which suggest connections to the Southeastern Ceremonial Complex (SECC) which began as early as 1897 in Cushing's published preliminary report on the Key Marco excavations must be used with caution. Cushing compares some of the designs on the Key Marco artefacts to those found at Etowah, Georgia, a site which exhibits traits of the SECC (Cushing [1897] 1973: Plate XXXV). More recent works such as Clark's evaluation of the masks and figureheads from Key Marco also point to resemblances to SECC themes (1995). Exotic materials in tandem with SECC-related motifs suggests at the very least a peripheral participation in this wide-ranging phenomenon in the Southeastern U.S. (Widmer 1989).

The nature of cultural interactions between the Calusa and their close and distant neighbours continue to raise more questions than answers. South Florida shares environmental features with the coastal areas of the Gulf of Mexico stretching in a crescent-shape from

Mesoamerica to Florida. Whilst some cultural similarities may be related to cultural interaction or diffusion of traits, there continues to be concern that independent invention resulting from similarities in environmental setting and in the availability of similar materials has been the source of cultural similarities. But intriguing evidence from a recent linguistic analysis of the few known Calusa words points to a connection between the Calusa and the Tunica who were located historically in the Lower Mississippi River Valley. Further research is needed to gain an informed understanding of the Calusa and their relationship to close and distant neighbours.

Our clearest understanding of the Calusa culture comes from ethnohistoric documents which provide us with a snapshot of the Calusa at a fixed point in time. Their coastal adaptation to a rich estuarine environment appears to have begun centuries before, perhaps reaching an hierarchical culture as early as A.D. 500. By then, the development of coastal shell middens had crescendoed into the formation of shell mounds, and the excavation of canals which transformed the appearance of the landscape in tandem with the construction of ritual buildings atop shell platform mounds.

Despite changes to Calusa material culture as a result of impacts from European Contact, the Calusa culture appears to show strongest links to prehistoric traditions found within South Florida. Development of the complex, hierarchical society of the Calusa recorded by the Spanish in the mid-16th century continues to spur debates. Chapter 5. "Theory" puts forth rival theories concerning Calusa development and seeks to support the view that Calusa cultural complexity was the result of a slow, steady process which emerged during prehistory from an egalitarian society. Additionally, a view of Calusa cultural continuity for

nearly two centuries following Spanish Contact is presented, asserting the role of numerous factors in the persistence of Calusa isolation from the Spanish.

1. The Caloosahatchee River is a Seminole name where the suffix “hatchee” means “river” and therefore, the Caloosahatchee is named for the Calusa (“Caloosa” is the English spelling of “Calusa”).

2. Hernando Colon relates that during Columbus’ first voyage, the natives of Cuba are reported to:

...feed on the fish they catch, and on birds, crabs and other things they find ashore. The Indians are accustomed to eating unclean things, such as large, fat spiders and white worms that breed among decayed wood and other rotting matter. They eat some fish almost raw, and immediately on catching them. Before they boil them they tear out their eyes and eat them on the spot. They eat many things that would not only make any Spaniard vomit but would also poison him if he tried them (Colon in Cohen 1969:81).

3. There are no known domesticated animals reported in ethnohistoric accounts of South Florida cultures. Small, barkless dogs thought to be semidomesticated are known, though, from the West Indies and are reported from Columbus’ voyages (Highfield 1997:163; Cohen 1969).

The existence of dog burials, including one in the Panhandle of Florida and dating to A.D. 500 -- 800 indicate the presence of dogs within Florida native cultures (Lazarus 1979).

Cushing states that, “...the skulls of two dogs, in our collections from the muck, were commented upon by the late Prof. Edmund Cope, as apparently, almost certainly, skulls of the species of dog common in Incan times to the Peruvian and Bolivian Highlands” (Cushing 1973:447).

4. The use of prickly pear cactus fruit has been extensively documented in the southwestern U.S. by Alvar Núñez Cabeza De Vaca, a member of the ill-fated Narvaez Expedition of 1528 which landed at Tampa Bay and travelled around the Gulf Coast, eventually crossing Texas in search of New Spain. During Cabeza De Vaca’s travels through the Southwest, he describes living with North American tribes who await the

midsummer ripening of prickly pear cactus fruit. Cabeza De Vaca describes the hunger of the winter and spring months when one did not eat for three or four days at a time. The season of the ripe prickly pear cactus fruits was highly anticipated (Bishop 1971). Calusa use of the prickly pear cactus fruit probably never reached the same proportions as that described by native cultures in the Southwest because the Calusa lived within a more abundant environment.

5. Regarding the medicinal use of Peru Bark for fevers, Robert Jackson, M.D. writing in 1791 states that:

When I first arrived in Jamaica, in the year 1774, I found that the practitioners of that country very generally believed, that the course of the ordinary endemic fever was checked with great certainty, by the powers of Peruvian bark. This opinion, indeed, is found in every medical book, and it appeared frequently, on the first view of the subject, to be well founded (Jackson 1791:210).

Jackson maintains that while Peruvian bark is helpful, that it is not a miracle cure that will bring a certain and swift end to the endemic West Indian fever (Jackson 1791:210-3). Still, its use was extensive. Jackson states that:

Peruvian Bark is the chief remedy, upon which we now depend, for the cure of intermitting fevers. It is a remedy, which like others has undergone some reverses of reputation, since its first introduction into Europe; and though its efficacy is now fully acknowledged, perhaps over-rated by English practitioners; it does not seem to have gained the same general credit with other European nations. The French use it with caution; and many of the Germans are still its enemies (Jackson 1791:317).

6. Prehistoric canals are noted elsewhere in the Americas. An aboriginal canal located along the coast of the Yucatan is 10 kilometres long and links an interior lake to a coastal lagoon (Lange 1971:634).

CHAPTER 5. THEORY

Theories of Calusa Development

Spanish descriptions of the Calusa clearly portray a complex chiefdom¹ society at the time of official European Contact. The Calusa culture at the time of Contact contains features typically associated with complex chiefdoms, including:

- ◆ The fact that the Spanish used the Arawak term “cacique” to describe the Calusa leader. The Arawak word refers to “chieftain.” Grudgingly, the Spanish even called the Calusa leader “king” and they recognized the Calusa as the most impressive chiefdom in Florida (Hann 1991:191). This was a specific hereditary leadership post within the Calusa culture. Sibling marriage was reserved for the Calusa cacique which solidified his legitimacy (Hann 1991:195). And vassal villages were required to offer a bride to the Calusa chief which furthered the political control of the Calusa chief (Hann 1991:193).
- ◆ There existed a ruling elite class which was usually related, but which played a role in the marked social differentiation of the Calusa. The ruling elite were often related which served to further their ideological power and, “The ruling elite possessed esoteric knowledge and controlled sacra charged with supernatural meaning, which probably were major bulwarks for their political power” (Hann 1991:192-3).
- ◆ Tribute marked the relationship between the Calusa and their vassal villages. It was collected from as far away as Lake Okeechobee and at one time, the Calusa controlled all of southern peninsular Florida. Tribute as a source of economic control is considered an important aspect in the development of cultural complexity.
- ◆ Additionally, commoners and a military class were also a part of the Calusa social

stratification which was noted by the Spanish.

Theories regarding the development of Calusa cultural complexity have begun to emerge, although the dearth of archaeological data has caused these hypotheses to remain somewhat unchallenged. Nevertheless, a review of the theories presented thus far is informative. The environment appears to play a large role in most of the ideas to date, and including the earliest as proposed by Frank Hamilton Cushing.

Frank Hamilton Cushing

In 1895, after viewing a small but significant collection of artefacts recovered from the Key Marco site by Colonel C.D. Durnford, Frank Hamilton Cushing theorized about the culture it represented:

The relics themselves were indubitably Indian and pre-Columbian. To me they evidenced remote aboriginal occupation, residence that is of the actual site in which they had been found, rather than of merely the neighboring shell-banks. I believed, indeed, that their condition and their occurrence beneath the peaty deposits of muck might even betoken some such phase of life in southern Florida as that of the Ancient Lake Dwellers of Switzerland, or of the Pile and Platform Builders of the Gulf of Maracaibo or the Bayous of the Orinoco in Venezuela (Cushing [1896] 1973:330).

Cushing's views of the Key Marco site were unique and extensive. Following his excavations in 1896, he theorized that these 'key dwellers' lived in huts situated on piles in the shallow waters next to the coast. Their location apart from the mainland was crucial in: 1) avoiding pesky gnats and mosquitos, 2) procuring their livelihood from gulf waters, 3) avoiding unnavigable shallows, and 4) protecting them from their enemies (Cushing [1896] 1973:336-7, 396, 403). Discarding refuse around their pile dwellings, according to Cushing, eventually resulted in massive shell mounds and middens.

The earliest 'key dwellers' along the southwest Florida coast came from farther south according to Cushing's theory. Moving from South American coasts and through the Caribbean, the 'key dwellers' landed on Florida shores and from that moment on, developed into a North American Indian culture (Cushing [1896] 1973:409).

Great shell mounds and middens at Pineland in Pine Island Sound and at other sites in Southwest Florida were thought to be a secondary stage or offshoot of the 'key dweller' culture and preliminary to the widespread development of a Southeastern U.S. moundbuilding tradition. Cushing thought that the moundbuilding tradition was derived from an analogous shore-land environment along the Mississippi drainage (Cushing [1896] 1973:343,400). He believed that more northerly gulf cultures probably contributed to the diffusion of these traits to the Mississippi drainage. Cushing states that:

No other theory of mound building in general, thus far advanced, especially of mound building as it was practiced in the Mississippi and Ohio regions and all through the Southern States, accounts, it seems to me, so satisfactorily or so directly and simply, for the origin of this remarkable practice (Cushing [1896] 1973:403).

Cushing's theory concerning the origins of the moundbuilding tradition in North America ignores Cyrus Thomas' definitive report on North American mounds and their origins which was published by the Bureau of America Ethnology 2 years earlier. Thomas' report essentially views moundbuilding in North America as a culture trait endemic to the continent in contrast to Cushing's search for external origins. Cushing's views on the origins of the Southeastern U.S. moundbuilding tradition have not been accepted, but it is vintage Cushing for him to propose an overarching theory to encompass his area of investigation across time and space. Cushing's thoughts on general cultural development are best summed up by his

comment that:

Cultures belong less, primarily, to distinct peoples than to distinct environments. An environment and the essential conditions of human existence therein, makes indeed, not only a culture, but goes far toward making a race; that is, toward moulding or unifying, racial traits, in whatever kind of man or kinds of men come into it and there remain for a sufficient length of time (Cushing [1896] 1973:406).

In summation, Cushing believed that the 'key dwellers' of Key Marco migrated from a southern locale to the southwest Florida coast. Once there, the adaptations they utilized in the shoreline environment although originally from elsewhere remained practical in light of the difficulties that existed. Cushing felt that Calusa cultural development was based primarily in response to their shore-land environment. Survival within this environment required the occupation of keys which was accomplished through the construction of shellworks. This type of theory reflects an environmental determinist viewpoint of Calusa cultural development which is prevalent in South Florida archaeology.

John Goggin and William Sturtevant

Similarly, Goggin and Sturtevant point to the rich estuarine environment as the basis of the Calusa cultural complexity and stratification. They theorize that the absence of agriculture in southwest Florida was not an obstacle to progressive cultural complexity because the vast estuarine resources along the shallow and sheltered southwest coast fulfilled the role played by agriculture in other hierarchical societies. Calling this "environmental liberation," Goggin and Sturtevant feel that the abundance of the environment was instrumental in allowing complex social development in Southwest Florida (Goggin and Sturtevant 1964:179-180).

Goggin and Sturtevant write that:

Calusa subsistence was based on the abundant, relatively stabilized food supply provided by the rich inshore marine resources. The role filled by agriculture in other cultures of comparable type was here filled by intensive fishing. It is conceivable that the cooperative work pattern necessary for taking mullet by net were related to other areas of Calusa social interaction (Goggin and Sturtevant 1964:207).

As an extension of Cushing's theory that the environment determines the culture, Goggin and Sturtevant identify a significant environmental feature (abundance) which they feel provides the basis for the complex Calusa culture. Because they feel that environmental factors were important to the development of the Calusa culture, the approach taken by Goggin and Sturtevant falls into the category of cultural ecology.

While it may be true that the rich southwest Florida estuarine environment provided an *economy of abundance* for the Calusa, Goggin and Sturtevant shed no light on the catalysts which led to social complexity and stratification. More recently, theories more directly regarding the *development* of Calusa complexity and stratification have been put forward.

William Sears

Sears believes that between 5000 and 3000 B.C., a preceramic culture was established in Florida in the inland, freshwater swamps from the northern St. Johns area to the southern Everglades. He believes that this culture came from Venezuela, moving through the Caribbean and spreading through the freshwater inland areas. At 2000 B.C., Sears envisions the introduction of plain fibre-tempered pottery to Florida from the northern South American coast. Finally, at 1500 B.C., decorated fibre-tempered pottery was introduced from the same area (Sears 1977:6).

Based on his excavation work at the Fort Center site near the western shore of Lake Okeechobee, Sears states that the savannah areas around Lake Okeechobee were settled by 500 B.C. Semi-fibre-tempered pottery was used during that time and tools made of marine shell were utilized. In addition, earthenworks were constructed and Sears believes that these were used in the production of maize, and that they resemble those used in South America for agricultural purposes (Sears 1977:6-9). Evidence for the use of prehistoric maize agriculture in South Florida is not completely convincing at this point in time. By 0 A.D., development of a wooden charnel platform over an artificial pond at Fort Center was decorated with wood carvings of birds and other animals. By 1000 A.D., the Fort Center site had been abandoned and only single small house mounds were in use (Sears 1977:10-11).

According to Sears, cultural development in South Florida was the result of, “. . . a steady stream of small-group movements [which] seem to explain the observed phenomena" (Sears 1977:12). Sears points to cultural diffusion as a source of new cultural traits which were introduced by small migrating groups. This explanation of South Florida cultural development relies wholly on diffusion of traits from a similar environment.

Randolph Widmer

Widmer views the development of a complex, stratified Calusa culture as a result of processes linked to sedentism. Sedentism allowed an increase in fertility which led to a rapidly expanding population. Once the environment reached its carrying capacity, it was necessary to develop leadership in order to meet the needs of this expanding population through increased subsistence efficiency. This leadership eventually led to unequal social power and ultimately, chiefdoms (Widmer 1988).

Sedentism, which begins the chain of events resulting in social stratification, is the expected response within an environment where resources are the same throughout. This homogenous type of environment is Widmer's characterization of the Southwest Florida coast. Sedentism is expected in such an environment since the energy required for movement would outweigh the energy required by staying and utilizing the resources at hand (Widmer 1988:261-276).

The result of increasing population to the point of carrying capacity would require the control of fishing grounds along Southwest Florida's coast. Widmer speculates that kin groups developed control over specific fishing grounds. Differences in the productivity of fishing grounds would lead to differences in power. Kin groups in control of more productive fishing grounds would be able to support more people and therefore, more power through kin affiliation.

Widmer states that:

Efficient, highly specialized, sophisticated, and balanced subsistence systems require management in many areas, such as procurement of raw materials and implementation of technologies designed to tap the productivity of the environment. The development of fixed, centralized power is thus permitted, or even encouraged, so that conflict may be minimized and economic stability maintained (Widmer 1988:265-6).

Control of access to fishing grounds, fresh water, and subsistence technology were all issues which may have been catalysts in the development of power. Once established, Widmer states that:

A continuous, daily reallocation of fish production has strong feedback effects for the development and reinforcement of a centralized polity and probably was the *critical factor* [emphasis mine] in the Calusa

adaptation (Widmer 1988:269).

Widmer also believes that endemic warfare between culture areas was a natural result of the pressures of population increases. Protection of resources, expansion of resource boundaries, and punitive raiding to increase subsistence sources were important activities in maintaining this level of cultural development.

Pointing to similarities between the Calusa and Mississippian culture, Widmer argues that:

By processually reinterpreting the various sociopolitical and economic characteristics of the Late Prehistoric adaptation, it seems that there is little functional difference between this adaptation and other more typical Mississippian adaptations. The same factors and variables correlated with their development also occurred in the Calusa example; only the specifics -- that is, fixed fishing grounds instead of agriculture fields -- are different. Therefore, the Calusa are not as unusual or different as they might initially appear (Widmer 1988:276).

Widmer's approach to Calusa sociopolitical 'evolution' is dependent upon the carrying capacity of Southwest Florida's coast which he believes was reached by ca. A.D. 700 to 800 when the coastal estuarine environment stabilized from previously fluctuating sea levels. By this time, chiefdoms had developed in response to the rapidly growing population pressures (Widmer 1988:279).

The perplexing persistence of this adaptation lacking agriculture in Southwest Florida during the development of agriculture throughout most of the remainder of the Southeastern U.S. in Mississippian times is best understood in terms of the environment. In the absence of agriculturally-conducive lands, the Southwest Florida coastal populations would reap no benefits in attempting agricultural pursuits within such an environment.

Widmer's arguments are persuasive and useful in providing a clearer perspective of the bountiful nature of the southwest Florida coast. He emphasizes the *economy of abundance* that this environment provided and links it to the establishment of a sedentary lifestyle. Sedentism, according to Widmer, is the foundation for the development of Calusa cultural complexity. Widmer's insight is useful in understanding the possible forces behind increasing sedentism. His overall approach suggests the same sort of cultural ecology demonstrated by the previous theories, albeit he takes explanation of cultural development one step further.

William Marquardt

William Marquardt views the advent of Calusa complexity and stratification as an historic development. As the catalyst for complex socio-political development, Marquardt hypothesizes that the introduction of European material culture, including goods salvaged from Spanish shipwrecks, created an atmosphere which fostered hierarchical development (Marquardt 1991:xvi; 1992a:2). He explains that:

When European goods found their way into traditional exchange networks, they were accorded high value by the natives. As these goods came increasingly into the hands of those on the periphery of the Calusa sphere of influence, there might well have been a tendency toward decentralization of authority, the response to which triggered an imposition of new power and tributary relations (Marquardt 1987:103-110 in Marquardt 1991:xvi).

Marquardt focusses on control over European material culture as the basis for the development of the powerful, hierarchical Calusa society reported by the Spanish in the mid-16th century. The introduction of European material culture provided a large amount of exotic goods which lesser chiefs were eager to collect in order to increase their own status, but ultimately threaten the overall power of the Calusa paramount chief. In response to this

threat, Marquardt believes that the Calusa paramountcy reasserted its control by developing an adequate military force and a system for redistribution to supporting groups (Marquardt 1991:xvi-xvii).

Marquardt stresses the historic development of Calusa complexity. The forces at work involve Calusa *response* to European material culture and ideology which challenged the Calusa culture. Calusa cultural complexity emerged, according to Marquardt, out of a need to regain control in the realms of social and ideological power. Marquardt argues that this reconsolidation of Calusa political power occurred in the 16th century following the infusion of European material culture and trade activity. This reconsolidation, according to Marquardt, could also be linked to depopulation due to European-introduced diseases. Interior chiefs and their subjects may have immigrated to the coast, filling out the dwindling coastal populations and contributing to a successful reconsolidation (Marquardt 1988:110-112).

Historical accounts appear to support an historical development of Calusa complexity. The Narváez and de Soto expeditions fail to mention the Calusa even though the Calusa “Heartland” was located not far from their landings (Hann 1991:219). Some believe this reflects a lack of cultural complexity in early protohistoric Calusa society.

Marquardt views the development of Calusa cultural complexity as a reconsolidation of Calusa power following the influx of high-status European material culture into South Florida and preceding Menéndez’s 1566 meeting with the Calusa. The decentralising effects of widely distributed European material culture resulted in a renewed claim to centralising

Calusa power (Marquardt 1991; 1992a).

Julian Granberry

Recent work by Granberry consists of a linguistic study of the few known Calusa words. He compares these Calusa words to Central and South American languages as well as other Southeastern U.S. native languages. He concludes that the Calusa language is closely related only to the Tunica language. The Tunica were located in the Lower Mississippi River Valley.

During the Late Archaic/Early Gulf Formational (4,500 + y.a.), Granberry notes the extensive and influential trade and cultural interaction which took place in the Southeast and the lower Mississippi River Valley. He postulates that during the Middle Archaic, similar activities were taking place to bring lower Mississippi Valley culture in contact with Floridian cultures. The archaeological record appears to be increasingly supportive of this hypothesis.

Early archaeological evidence of this type of contact between Southeastern cultures, according to Granberry, occurs during the Early and Middle Gulf Formational Periods ca. 2500 - 500 B.C., "...with the intermeshing of the Timucua and Poverty Point trade networks..." (Granberry 1995:168). The Timucua trade moved west and southward from the Georgia Atlantic coast while the Poverty Point trade moved east and southward from the Mississippi River. These two trade networks focused on the movement of steatite and steatite wares from the Piedmont to other regions up and down the Mississippi and its tributaries (Granberry 1995:168). Along with this focus on steatite trade, the concepts and

techniques of fibre-tempered pottery-making also travelled along these trade routes.

Granberry states that:

There is no question but that these two trade networks had a tremendously pervasive influence throughout the Southeast throughout the Middle Gulf Formational (1995:169).

Direct connections between Florida and other distant locations within the Southeastern U.S. are suggested in the archaeological record. The presence at Florida sites of clay cooking balls which resemble those found at Poverty Point are considered evidence by Granberry that Lower Mississippi Valley cultural traits were present throughout Florida by 2000 B.C. or soon thereafter. [Note: St. Johns pottery from northeast Florida has been found at Poverty Point.]

Granberry believes that traders from the trading networks may have ultimately spread cultural traits from the Lower Mississippi River Valley and become colonizers in various locations. Granberry stresses that hostile takeovers where new cultural traits are introduced usually result in rapid cultural change and tend to be obvious within the archaeological record. Traders intending instead to maintain peaceable relations within a new cultural setting will blend in with their new culture. In the archaeological record, little will be present to signify their subtle cultural impacts. Granberry feels that acceptance of these migrant peoples from the Lower Mississippi River Valley and their cultural traits in South Florida may be reflected in their closely related languages (1995:170). Granberry concludes:

That sixteenth century Calusa forms show such a close correspondence with twentieth century Tunican forms suggests either that the Calusa language for which we have documentary records was a relative late-comer to Florida -- for daughter languages from a single parent would be expected to exhibit considerably more change than is evident in our data over the 3,500 years separating Poverty Point from Fontaneda's times -- or that

there was a more or less continuous contact of Tunica and Calusa speakers over an extremely long period of time (Granberry 1995:170).

Using Widmer's conclusions regarding the estimated beginning of a Calusa culture at A.D. 700 to A.D. 800, Granberry postulates that during that time period, the Calusa language most likely exhibited the strongest links between the Lower Mississippi Valley and the Calusa-speaking people. Granberry states that, "The sixteenth century A.D. Calusa, then, may have been the descendants of the last Tunica-stock migrants to settle Florida" (1995:170).

Granberry concludes that the close linguistic affiliation between the Tunica and the Calusa was a result of cultural diffusion from the Tunican homeland in the Lower Mississippi River Valley to South Florida. Further research comparing cultural traits may reveal additional evidence of possible cultural interaction between the two cultures (See Chapter 4. for further discussion of the Tunican culture).

Discussion

A critique of the theories reviewed above provides a useful summary of the various approaches to the development of Calusa cultural complexity. Reliance on environmental factors as explanation for cultural development pervades most early theories.

Whilst Cushing views environmental features as the determining factors for cultural development, some would argue that this sets forth no clear explanation for the development of Calusa cultural complexity. Environmental factors shape human response, but are not the catalysts which create cultural complexity which remains separate from environment.

Archaeological evidence and ethnohistoric data reflect Calusa cultural complexity. But even within the rich estuarine environment of the southwest Florida coast, the Calusa response is not the only one possible.

Goggin and Sturtevant pursue a similar environmental explanation as the basis of Calusa complexity. Their idea of "environmental liberation" more or less equates the bountiful estuarine environment with agricultural abundance. This natural abundance allowed the development of cultural complexity filling the role that agriculture played in other complex societies. Again, there are no explanations provided for the development of social complexity. Abundance provided by the environment means that food is plentiful, but not that cultural complexity shall result.

Sears looks to the continuous movement of small groups introducing various cultural traits to South Florida cultures. Based on this thought, the advent of cultural complexity must also result from cultural transmission via trade or migration. This lacks any real explanation for emerging cultural complexity and instead puts the onus on exogamous cultural contact.

With respect to the theory of adaptation proposed by Widmer who views the Calusa development of cultural complexity as a result of the unique, rich estuarine environment that allowed sedentary behaviour, increased fertility, and population pressures resulting in cultural complexity, some would argue that population pressures do not automatically result in increasing cultural complexity (Earle 1994). Since Widmer considers the Calusa 'adaptation' to be in place by A.D. 700 to 800, this long-term gradual subsistence development over centuries may have provided a stable source of economic control. But a

larger problem with Widmer's hypothesis is the timing of the Calusa 'adaptation.' It seems unlikely that the Calusa would develop into a complex hierarchical society at such an early date and continue virtually unchanged for the next 800 years.

Marquardt theorizes that Calusa complexity developed in response to impacts as a result of the introduction of European material culture. With respect to historical process, this theory of cultural response to outside impacts provides an explanation of the development of Calusa cultural complexity. Marquardt's timing of Calusa cultural complexity corresponds well with Spanish reports.

An Alternative View

The recent popularity of a cultural ecology approach views the evolution of complex societies as an adaptation to such problems as population pressure. In the face of population pressure, though, social mechanisms that control population within non-complex societies might well be used. There is no catalyst in the form of adaptation that causes a society to become culturally complex instead of using social mechanisms to control population. Rather than improving technology (within the context of an increasingly complex culture) to allow increased subsistence productivity, population-curbing social mechanisms such as infanticide and abortion can in an equally effective manner provide a balance between population and subsistence (Earle 1994:940-945).

These questions regarding population pressure can be taken further. L. Antonio Curet has found in eastern Puerto Rico that the prehistoric population never reached the environment's minimal carrying capacity or over exploited the resources during the process of developing

into complex chiefdoms (Curet 1996:116). In Southwest Florida, no rigorous examination has taken place to determine the relationship between prehistoric populations and environmental capacity. Based on the incredible amount of food that was available from the rich estuaries, my opinion is that the populations of Southwest Florida also never reached its minimal carrying capacity or over exploited the resources. Therefore, Widmer's hypothesis which is based on population pressures driving the development of cultural complexity would no longer be viable.

Marquardt's theory which looks to the impacts caused by the introduction of European material culture also deserves additional consideration. Without question, European goods created chaos. The Calusa transformed the power of European material culture, ultimately to their own advantage. Social and ideological power were probably affected as minor chiefs struggled to gain status through the collection of European goods and European religious concepts which flooded native Florida cultures. The powerful restructuring of Calusa control to reestablish Calusa dominance may have created the phenomenon described by the Spanish in the mid-16th century.

But I would argue that a complex chiefdom had already been established prior to the infusion of European material goods into the native economy. Again turning to L. Antonio Curet's model of complex chiefdom development in eastern Puerto Rico is instructive.

Curet envisions a slow, steady process of shifting ideology which begins as group-oriented, but eventually becomes chiefly-oriented. This process is characterized by a renewal and magnified focus on communal ideology which can be expressed in the construction of

monumental architecture and other material culture. Slowly, communal ideology is transformed into chiefly ideology. Eventually, symbolism is under the control of the elite as monuments and symbolism becomes associated with the elites. Curet states that:

. . . ideological power, in the form of rituals in which the elite legitimize their rule, is more effective and stable than the use of military force but takes a longer period of time to establish. Thus, the developmental process of some pristine chiefdoms is expected to be gradual and should show a process of increasing complexity roughly shifting from an egalitarian organization to simple chiefdoms and depending on the particular case, eventually to a complex chiefdom (Curet 1996:122).

Curet concludes that:

. . . although social complexity might have taken a long time to develop, we are able to detect most of the evidence for social differentiation during the advanced stages of the process. The impression of a fast social process is only an archaeological artifact (Curet 1996:125).

The latter stages of cultural complexity, as noted by Curet, creates the illusion in the archaeological record of a sudden development of cultural complexity. Social differentiation begins to manifest itself in material culture where earlier emphases had been on communalism. The emphasis on communalism utilized by emerging elites blurs the demarcation in the archaeological record between egalitarian and chiefdom societies (Curet 1996:123).

Changes in pottery design in eastern Puerto Rico show “...a gradual and continuous decrease in the diversity, quantity, and quality of decorative techniques and designs... (Curet 1996:114) which illustrates the gradual control over symbolism by elites.

Curet’s explanatory model for the development of cultural complexity in eastern Puerto Rico

sheds new light on the probable prehistoric emergence of Calusa cultural complexity. The Calusa archaeological record reveals the early construction of shell mounds which appear to be a part of an egalitarian society (Russo 1991). This monumental architecture follows the pattern set out by Curet in eastern Puerto Rico. The presence of extensive trade resulting in the exchange of exotic materials suggests economic stratification within Southwest Florida during prehistory. In addition, the Spanish report that tribute was sent to the Calusa cacique by vassal villages, some quite distant.

Ceramic studies of Southwest Florida pottery are somewhat limited to date, but a general trend in pottery decoration seen in late prehistoric pottery indicates a loss of decoration and a predominance of the use of sand-tempered plain pottery (Cordell 1992:168). Perhaps as Curet suggests in eastern Puerto Rico, this points to the increasing control over symbolism by elites.

By the time the Spanish arrived, the Calusa culture was a complex chiefdom which was supported by the intertwining of control of ideological, military, economic, and social arenas. Lessening of one aspect of control, such as ideology, led to an increase in other forms of control in order to compensate and maintain an overall level of power by the elites.

Because the type of development of cultural complexity proposed by Curet for eastern Puerto Rico (1996) is slow, the apparent rapid development of cultural complexity may instead be viewed as a shift to militaristic power from a previous predominance of ideological power. The introduction of European material culture may have led to the development of militarism to counterbalance losses from ideological control. The

successful, long-term complex chiefdom binds together control over economic, ideological, militaristic, and social institutions and continuously supports this control through investments made via economic control (Earle 1994).

Calusa Cultural Continuity: A Theory of Survival

Whether considered a chiefdom, an early state, or a weak tribute-based state, the Calusa social formation was complex (Marquardt 1988:99-100). Marquardt states that:

...at the time of European contact the Calusa productive system depended upon intensive fishing, gathering, hunting, collecting, and craft production by commoners. The nobility had privileged access to subsistence and wealth; priestly and military specialists managed the ideological and political spheres. Politics and ideology were focused on the paramount chief/king, whose spiritual power was directly linked to the productivity and prosperity of all. His authority extended beyond southwest Florida to a number of south Florida polities, each apparently managed by a head chief, or cacique. These chiefs managed the affairs of their own domains and ensured that the tribute flowed to the paramount, who sometimes redistributed wealth to his subordinates (Marquardt 1988:101).

Despite intense early European contact with the Calusa described in historical records, for two centuries following the first official European contact, the Calusa culture remained intact:

...south Florida groups...persisted with little apparent structural change for nearly 200 years after direct contact with the Spanish. There is every indication that the social structures and ideology of the south Florida social formation were more or less intact as late as the mid eighteenth century, after the Calusa had been overrun by northern Indian invaders and had suffered disease and consequent population losses (Marquardt 1988:110-111).

The Calusa never fully accepted any aspect of European culture and instead consistently reacted with hostility towards the Spanish. By not adopting European culture, the Calusa were unlikely to lose the integral components of their own culture. Their lack of investment

meant that they could walk away from European culture and maintain their native culture. Notably, if Calusa cultural complexity was rooted in a long, slow prehistoric development process which resulted in an historic chiefdom supported through the intertwined control over economic, ideological, military, and social aspects of Calusa life, the depth of the Calusa chiefdom may also have served as a bulwark against Spanish intrusion.

The Calusa hostility towards the Spanish served to isolate the Calusa from Spanish inroads. Other factors including the hostile nature of the South Florida environment conspired to allow the Calusa to be buffered from European incursions (See Chapter 8. "Isolation of the Calusa"). Cultural changes probably took place as a result of European Contact, but it appears that the Calusa culture as an identifiable entity retained cultural continuity for nearly two centuries after official European contact and until their dwindling numbers resulted in extinction.

This limited contact with the Spanish over two centuries following initial contact may have played the most critical role in the resulting Calusa cultural continuity. During that time of contact, for example, there are no recorded epidemics among the Calusa. In Brazil at the same time, missionaries recorded devastating epidemics among the natives there. After the De Soto expedition most of the Southeastern U.S. communities visited by the Spanish seem to have collapsed due to great population losses attributed to European diseases introduced and spread by the De Soto entrada. The native cultures were able to repulse the Spanish on military grounds and were not victims of acculturation. Instead, these deadly diseases effectively crippled these native cultures through deculturation. Demographic collapse due to European and probably also African diseases (introduced by African slaves brought to the

Caribbean) was a common occurrence amongst the native cultures of the Southeastern U.S.

The Calusa were able to successfully negotiate the challenges represented by European Contact for nearly two centuries. Control of European material culture *and of European shipwreck survivors* may have heightened certain aspects of the Calusa culture by expanding their range of military power through the domination of Europeans who were thought to be god-like. This militaristic response was successful, but may have partially been a response to a loss of ideological control as European culture flooded South Florida.

The reconstruction of impacts to native Florida cultures from European Contact is a difficult task. One of the most difficult aspects of these investigations is the fact that the earliest impacts to South Florida natives from Europeans and European material culture in the New World are largely undocumented. As described in Chapter 6. "Protohistoric European Contact," numerous opportunities existed for impacts to occur before face-to-face official Spanish Contact occurred in Southwest Florida in 1566.

1. The definition of a complex chiefdom as it is used within this paper is based on the concept that complex chiefdoms consist of polities of tens of thousands of people and which is characterized by marked social differentiation. Conversely, simple chiefdoms consist of polities of only a few thousand people and is characterized by modest social differentiation (Johnson and Earle 1987 in Earle 1994:945)

Additionally, a complex chiefdom is considered a sociopolitical system which includes an institutionalized hereditary office of leadership with heritable social ranking and economic stratification (Service 1962 in Curet 1996:121-2) where ascribed status is more prevalent than achieved status and resources are restricted (Curet 1996:122).

CHAPTER 6. PROTOHISTORIC EUROPEAN CONTACT

By the time Menéndez de Avilés established the first successful Spanish settlement in La Florida at St. Augustine in 1565, Florida native cultures had already been greatly impacted by protohistoric European Contact. Florida natives were exposed to European material culture, diseases, shipwreck survivors, refugees fleeing Spanish persecution in the Caribbean, illegal slave raids on Florida native communities, and unauthorized and early exploration. The Calusa culture had already undergone a transformation as a result of these impacts when Menéndez first landed on Southwest Florida shores.

The driving force behind Spanish interest in Florida revolved around wealth. Primarily, concerns regarding the safety of Spanish ships in Florida coastal waters eventually resulted in the appointment of Menéndez to the Caribbean. Prior to his appointment, though, there appears to have been a significant amount of interaction between the South Florida Indians and the Spanish as a result of shipwrecks, slave-raiding, and early exploration efforts. A review of the factors which undoubtedly played a role in changing Calusa cosmography focuses on these types of protohistoric interactions between the Calusa and European culture.

Fleet ships returning to Spanish shores from the New World carried valuable metals mined from Peru and Mexico as well as other New World cargo. But shipwrecks were unfortunately a rather common hazard for the Spanish in the New World. Inexperienced pilots, poorly charted waters, piracy and storms conspired against heavily laden Spanish fleet ships. Many were lost on the southeastern coast of Florida where natives salvaged these

New World cargos.

Ships returning to Spain from the New World prepared for the trip in Havana and tried to begin the voyage in the early summer to avoid the hurricane season. Inevitable delays meant that many times they traveled during the deadly hurricane season. Some ships were lost in ferocious storms that dashed the heavily-laden boats onto beaches, reefs, and rocks.

The trip from the West Indies to Spain was not an easy task. Negotiating the narrow, fast-moving Bahama Channel was treacherous with sand bars, razor-sharp coral, and other snags. Once through the channel, the southeastern coast of Florida continued to plague the mariners as they skirted the coast in order to remain in the Gulf Stream and beyond the shallows of the Bahamas and all the while, waiting for a Westerly wind. The lack of trained pilots was a chronic situation for Spain. Primitive navigational instruments and small scale charts were constant sources of error. Shipwrecks continued to be relatively frequent throughout both the 16th and 17th centuries (Parry 1990:251-2). In an effort to reduce the number of trained crew necessary for the transportation of New World goods to Spain, larger ships were built to carry the freight of several small ships. But,

The employment of larger ships, beyond a point, gave no improvement in safety; on the contrary, thanks to extreme technical conservatism of the Spanish shipbuilding industry in the late sixteenth and early seventeenth centuries, size outran design. The largest ships -- unhandy, heavily armed, often overloaded -- were far more dangerous than those of moderate size... (Parry 1990:252).

Added to these piloting obstacles was the constant threat of piracy from the French and English who maintained a presence in the Caribbean from the 1520s to the 1680s. The French and English had been blocked by Spanish rule from gaining New World riches. They

sought to remedy this situation through piracy (Rogoziński 1994:36-8). Englishman Sir Francis Drake was the most successful in his efforts. In 1573 he managed to commandeer a load of Peruvian silver and in 1577, seized a Spanish ship carrying treasure (Rogoziński 1994:40).

The Spanish would frequently try to salvage the goods from the sunken ships, but this was not always practical. The Florida natives who may also have contributed to the heavy losses of Spanish ships, actively salvaged the cargo. For many of the Florida natives, this was probably their first encounter with European material goods. Spanish ships foundered and the natives plundered. One early Spanish explorer was surprised to find the natives in the Tampa Bay area in possession and use of European material goods salvaged from shipwrecks (Milanich 1998: 109).

As a result of Spanish shipwrecks, European material culture as well as precious metals and other New World items which comprised the cargo was strewn along Florida's coast. Milanich notes that, "Silver and even gold artifacts that the Spaniards had wrested from the Indians of South and Central America and Mexico were salvaged, some to be reworked by native people in Florida" (Milanich 1998:108).

Control over, interpretation of, and use of these materials were undoubtedly issues of concern to Florida's native cultures. Much of the cargo of precious metals appear to have been under the control of the Calusa who reportedly commandeered salvaged goods from locations along the South Florida coast. News of a shipwreck would bring the demands of the Calusa that the materials be handed over to them.

Fontaneda describes the South Florida native access to and distribution of shipwreck items:

The King of Ais and the King of Jeaga are poor Indians, as respects the land; for there are no mines of silver or of gold where they are; and, in short, they are rich by the sea, *from the vessels that have been lost well laden with these metals* [emphasis mine]... ([1575 in Smith 1973:32).

Fontaneda continues:

...I desire to speak of the riches found by the Indians of Ais, which perhaps were as much as a million dollars, or over, in bars of silver, in gold, and in articles of jewelry made by the hands of Mexican Indians, which the passengers were bringing with them. These things Carlos divided with the caciques of Ais, Jaega, Guacata, Mayajuaco, and Mayaca, and he took what pleased him, or the best part. These vessels, and the wreck of the others mentioned, and of caravels, with the substance of the Indians of Cuba and Honduras who were lost while in search of the River Jordan, and who came well off, were taken by Carlos, and by the chiefs of Ais and Jeaga ([1575] in Smith 1973:34-5).

Therefore, shipwrecks on the Southeast Florida coast were salvaged by the Indians living there, but the Calusa cacique, Carlos, divided the spoils. During the duration of Fontaneda's captivity among the Calusa, Carlos appears to have exercised control over the distribution and redistribution of European material goods recovered from shipwrecks.

Treatment of shipwreck survivors by the Florida natives as reported by Fontaneda reveals a strained relationship between the two cultures at best:

Many Spaniards have saved their lives by finding themselves with Christian companions already there. For the natives who took them would order them to dance and sing; and as they did not understand, and the Indians themselves are very mean, (for the most so of any are the people of Florida,) they thought the Christians were rebellious, and unwilling to do so. And so they would kill them, and report to their cacique that for their meanness and rebelliousness they had been slain, because they would not do as they were told; which was the answer, as I have said, made to the cacique when he would ask why they had killed them (Fontaneda [1575] in Smith 1973:33).

Many shipwreck survivors were slaughtered by the Florida natives. The Calusa sacrificed many of the shipwreck survivors. Along Florida's shores, Fontaneda states that, "...many vessels are wrecked, and many persons die; for the Indians are powerful archers, and oppose them..." ([1575] in Smith 1973:36).

A small number of shipwreck survivors were made slaves by the natives. These people were forced to carry water, collect firewood, and undertake other menial tasks considered demeaning by the natives. Eventually, the role of the shipwreck survivor was important to both natives and Spaniards. To the Florida natives living along the coast, European shipwreck victims could be paraded amongst inland communities where the coastal dwellers boasted that they had made slaves of *all* the foreigners. This became particularly influential when the Spaniards arrived with impressive displays of weaponry and armament.

And when the Spanish officially began exploration of Florida, these shipwreck survivors became indispensable as translators for the Spanish explorers. Not only did they know the language of the native community where they had been held captive, but they also knew something of the culture and its leaders. Menéndez was dedicated to ransoming the Christian shipwreck survivors, but at the same time, required their assistance in order to be successful in his efforts to communicate and win the cooperation of such people as the Calusa.

Clearly, some of the Spanish shipwreck victims who were enslaved by the Calusa became somewhat acculturated within the Calusa culture. Some Spanish women started families with Calusa men and resisted the efforts of Menéndez to rescue them. Solís De Merás states

that Menéndez left for Havana after his first visit to the Calusa without all the shipwreck survivors “...because 2 of the women had already gone back to the Indians, from the longing they had for the children that they were leaving behind” (Solís de Merás in Connor 1964:151). They chose to stay with their Calusa families rather than return to Spanish culture.

Other foreigners who found themselves in South Florida at this time were West Indian refugees. Facing enslavement by the Spanish and deadly European diseases, it is thought that the search for a cure to the deadly European diseases caused Cuban natives to flee to Calusa territory. Fontaneda states that:

The Jordan that is talked of, is a superstition of the Indians of Cuba, which they hold to because it is their creed, not because there is such a river. Juan Ponz de Leon, giving heed to the tale of the Indians of Cuban and Santo Domingo, went to Florida in search of the River Jordan, that he might have some enterprise on foot, or that he might earn greater fame than he already possessed and close his life, -- which is the most probable supposition, or, if not for these objects, then that he might become young from bathing in such a stream. This thought was of itself proof that all must have been fiction that was told by the Indians of Cuba and its whole neighborhood, who, to satisfy their tradition, said that the Jordan was in Florida; to which at least I can say, that while I was a captive there, I bathed in many streams, but to my misfortune I never came upon the river ([1575] in Smith 1973:28-9).

Some refugees from Cuba were allowed by Senquene, father of Calusa cacique Carlos, to live in a settlement within Calusa territory. Fontaneda again provides us with this historic report:

Anciently, many Indians from Cuba entered the ports of the Province of Carlos in search of it [a river or stream reported by the Indians to restore youth]; and the father of King Carlos, whose name was Senquene, stopped those persons, and made a settlement of them, the descendants of whom remain to this day... In the attainment of the promises of their faith, those of Cuba determined, for such was their vow, to venture their lives on that sea;

and it ended in all that numerous people who went over to Carlos forming a settlement... ([1575] in Smith 1973:29).

And while we only have a single known recorded report of Cubans migrating to Southwest Florida during protohistoric times, it seems reasonable to assume that not only other native West Indians, but perhaps also African slaves brought to the Caribbean by the Spanish fled to South Florida.

With this type of migration, word of the Spanish and their treatment of the native West Indians no doubt spread rapidly to Florida natives. Within a few short decades, the natives of Cuba and Hispaniola were nearly extinct as a result of enslavement, European diseases, and the overall disruption and collapse of their native culture. Depopulation of the native peoples of the Caribbean as a result of diseases came quickly. West Africans who were brought to the New World to replace the rapidly declining native populations introduced additional diseases to which the natives were not resistant. Milanich and Milbrath state that, "Extinction of native people from the Lucayos (Bahamas) and Hispaniola occurred rapidly as a result of epidemics made worse by enslavement and mistreatment" (1989:22).

Damaging epidemics also struck Florida native cultures, but unlike the Caribbean populations, some of the Florida cultures survived until the seventeenth or eighteenth centuries (Milanich and Milbrath 1989b:22). Dobyns states that:

Florida's native peoples began dying in considerable numbers very soon after the Spaniards first colonized the Caribbean islands. Scattered, written and unwritten, straightforward and inferential evidence, indicates that Spanish colonists and native merchants and refugees together created an epidemic region in the Caribbean. Epidemic conditions probably began in 1493 and certainly not later than the first decade of the sixteenth century. Native canoe voyagers linked Florida's natives to that epidemic region.

Ecologically, low-altitude, semitropical Florida became part of a lowland American tropical epidemic region as a result of the Columbian exchange (1991:58 & 60).

European and African diseases alike were introduced to the Americas, including: malaria, syphilis¹, hookworm, dengue fever, smallpox, typhus, influenza, bubonic plague, and yellow fever (Dobyns 1991:60). Dobyns feels that the introduction of these pathogens was the single factor resulting in the virtual extinction of the Florida natives by the beginning of the eighteenth century (1991).

During protohistoric times and the beginning of the European interaction with native cultures of the Americas, the introduction of these pathogens appear to have been already making significant inroads. Early European explorations introduced diseases to the Southeastern U.S. Coastal areas were at higher risk due to the higher frequency of European contact. But these diseases soon affected inland populations as well (Smith 1989:139). According to Smith, the major loss of population resulted in deculturation rather than acculturation:

The Indians of the interior Southeast were not becoming hispanicized but were simply losing parts of their own culture. Changes were taking place, but they were not acculturation (1989:147).

These changes to native cultures were occurring at different rates throughout the Southeast (Milanich 1990:7). Some native cultures in the Southeast disappeared while others changed greatly as a result of early European Contact and the devastating impacts from introduced diseases (Milanich 1990:18). Marrinan, Scarry, and Majors explain that:

The *social impact* [emphasis mine] of European contact was also dramatic. To a great extent, social cohesion was weakened as the ineffectiveness of native magico-religious practices against the biological

invasion became clear. Potentially destabilizing seizures of native leaders were common practice, further stressing the native political system (1990:79).

Traces of population losses due to Spanish military actions and the introduction of diseases have been identified in the archaeological resources north of Tampa Bay. Some believe that these population losses weakened the native culture centred at Tampa Bay, allowing the expansion of Calusa territory located to the south (Mitchem 1990:57). This illustrates the compounding affects of depopulation due to diseases which go far beyond the original introduction of the diseases.

The importation of African slaves into the Caribbean was common once the native populations began to dwindle due to epidemics. An immense amount of labour was necessary in the extraction of gold from the mines found within the Caribbean. In addition, sugar cane plantations to feed a booming sugar market from 1530 to 1570 also fueled the need for labourers in the Caribbean.

The African slave trade was limited through bureaucracy and for some Spaniards, illegal enslavement of Florida natives for use in the Caribbean was too tempting. There is enough evidence in the historical records to suggest that the illegal kidnaping and enslaving of natives from coastal communities in Florida occurred. Because of its illegal nature, no official records can be expected to exist (Milanich 1990:7). The hostile reaction of the Calusa to the Spaniards when first officially contact by Menéndez may be a reflection of slave-raiding activities along the Florida coast. The reputation of the Spanish undoubtedly preceded them.

Also generally unrecorded are unauthorized explorations in the New World by not only competing nations, but also by the Spanish. European involvement in the New World mirrored the tensions occurring across the Atlantic. As a result, English, Dutch, Portuguese, and French explorers illegally sailed to the West Indies and pursued exploration (and pirating) efforts. The political climate was tense and included at times, officially declared war amongst these countries. Rather incredibly, Milanich and Milbrath report that, “Historians have documented more than eighty such voyages [to the New World by Spain, England, Portugal, and France] between 1492 and 1504 (1989b:12). Maps dating to 1502 and 1507 appear to indicate a knowledge of the existence of the Florida peninsula prior to Ponce de León’s “discovery” voyage in 1513 (Milanich and Milbrath 1989b:11-13).

The French explorations in La Florida began in 1562, starting a settlement on Parris Island, South Carolina which failed soon thereafter. Then in 1564 the French built Ft. Caroline near the mouth of the St. Johns River in an effort to establish a French foothold distant from the Spanish stronghold of Havana in the New World (Milanich and Milbrath 1989b:23). This is the same French fort routed in 1565 by Spaniard Menéndez de Avilés.

Treatment of the natives by Spanish explorers and settlers was on the whole, deplorable. A militaristic attitude that had characterised the *Reconquista* in Spain continued to pervade Spanish culture in the New World. In Florida, Spanish actions against the native cultures reflected their view of the Indians as sub-human heathen barbarians. The kidnapping of natives, especially caciques, was not infrequent. The commandeering of native food stores by the Spanish occurred with regularity. Basically, the movement of the Spanish expeditions across the native landscape was a plague. Natives urged the Spaniards to move on to distant

locations which purportedly were rich with natural abundance of precious metals, stones, food, or whatever else the Spanish sought.

There was no dearth of Spanish explorers willing to attempt and hopefully capitalize on the settlement of Florida. The successes of Cortés and Pizarro were mythical to any Spaniard willing to take the risk of travelling to the New World and conquering a people and subsuming their valuable resources. But it would be 1565 when Menéndez de Avilés arrived on Florida's northeast coast and established St. Augustine before Spanish settlement of Florida would be realized.

Expeditions in Florida began with Ponce de León. During his 1513 voyage of "discovery," Ponce de León named the new-found land "La Florida." He also identified the Gulf Stream which became crucial for Spanish shipping (Milanich and Milbrath 1989b:13). During his exploration of the coast of La Florida, Ponce appears to have encountered the Calusa. Ponce entered a harbour located on Florida's southwest coast:

During the nine days they stayed there the Spaniards engaged in several battles with the native peoples, whose chief was Carlos... One native 'understood the Spaniards,' and spoke to them (Davis 1935:20). It was thought he was from Hispaniola or another Spanish island (Milanich 1990:8-9).

Spanish expeditions in 1517 and 1519 followed Florida's Gulf coast which was by then thoroughly mapped in relationship to Mexico (Milanich and Milbrath 1989b:13-15). Ponce de León returned to La Florida in 1521 to attempt a settlement, but was mortally wounded by natives and returned immediately to Cuba where he died a few days later. In 1526, Luca Vásquez de Ayllón tried to succeed where Ponce had failed -- the establishment of a

settlement in La Florida. This attempt was probably along Georgia's coast, but failed after only three months (Milanich and Milbrath 1989b:15-16).

In 1528, Narváez began an exploration of Florida with 400 soldiers and 40 horses. They landed at Tampa Bay and marched to northwest Florida in an effort to meet up with their ships. The rendezvous failed as the ships were nowhere in sight. Unable to find their ships, the Spanish built flatboats which they launched in an attempt to reach Mexico. Four survived the ordeal which lasted eight years and included the enslavement of the survivors by Texas natives (Milanich and Milbrath 1989b:16-17).

De Soto's expedition in Florida began in 1539, landing at Tampa Bay. Fortuitously, they immediately encountered a Spaniard, Juan Ortiz, who had been left behind from the Narváez expedition eleven years earlier. Spending the winter in north Florida pitted against the Apalachee Indians in skirmishes, the de Soto expedition then marched farther inland, covering much of the Southeastern U.S. in search of riches (Milanich and Milbrath 1989b:17-18).

In 1559, Tristán de Luna y Arellano attempted a settlement with 1500 people in the panhandle of Florida. A hurricane destroyed most of their ships and provisions as well as killing many of the colonists. The effort ended in failure. Ángel de Villafañe took the remaining settlers to the east coast of present-day South Carolina in search of new settlement location. Villafañe lost two ships in a hurricane and finally aborted the attempt altogether (Milanich and Milbrath 1989b:19-20).

Cosmographic Impacts

These early face-to-face encounters between native Florida cultures and Europeans which occurred in the early 16th century clearly impacted the native impression of these strangers to their homeland. Frequently overlooked by those studying the affects of European contact, impacts to cosmography are a major result of European Contact:

The increasing frequency of interactions with Europeans and European goods undermined the political and religious systems. Helms has suggested that native worldviews characterized Europeans (or any distant stranger) ‘as superhuman beings, wise strangers with exceptional power, much of which was expressed and evidenced by their access to quantities of unusual material goods and by their technical (‘magical’) skills and capacities’ (1988:205) (Marrinan, Scarry, and Majors 1990:78).

The first Europeans to enter La Florida were ‘men’ of a different sort, unlike the native himself or his neighbors. Their appearance was different; they had lighter skin, facial hair, and strange clothes. They had strange and powerful weapons and animals that did their bidding. In Helms’s view, as the European worldview predisposed the Spaniard to conquest and exploration, the native worldview predisposed them to be exploited (Marrinan, Scarry, and Majors 1990:78).

Throughout Columbus’ accounts of his voyages to the New World, references are made over and over to a native belief that the Europeans had come down from the sky. Bartolomé de las Casas states from Columbus’ first voyage that upon reaching San Salvador, Columbus reports that,

I saw two or three [villages], whose people all came down to the beach calling us and offering thanks to God. Some brought us water, and others various sorts of food, and others, when they saw that I did not intend to land, jumped into the sea and swam out. We understood them to be asking us if we came from the sky (de las Casas in Cohen 1969:58).

This belief on the part of the natives brought with it favours — food, water and gifts from the Indians. Therefore, it behooved the Spanish to maintain this belief for as long as

possible. Later arriving in Cuba during the first voyage, Columbus states that:

Having made our men sit down, all the Indians immediately sat on the ground around them, and then, one by one, came close to kiss their feet and hands, in the belief that they had come from the sky (Colon in Cohen 1969:78-9).

At Hispaniola:

When the inhabitants saw the Christians they all rushed out of the village and fled into the woods. But the Indian interpreter from San Salvador, who was with our men, went after them and shouted words of encouragement, saying much in praise of the Christians and affirming that they had come from the sky. The natives then returned reassured, and in awe and wonder as they placed their hands on the heads of our men as a mark of honour and took them off to a feast, giving them everything they asked for without demanding anything in return. They begged them to stay that night in the village (Colon in Cohen 1969:86).

Columbus provides some information regarding the beliefs of the West Indians:

They have no religion and are not idolaters; but all believe that power and goodness dwell in the sky and they are firmly convinced that I have come from the sky with these ships and people. In this belief they gave me a good reception everywhere, once they had overcome their fear; and this is not because they are stupid — far from it, they are men of great intelligence, for they navigate all those seas, and give a marvellously good account of everything — but because they have never seen men clothed or ships like these (Colon in Cohen 1969:118).

Because Columbus benefitted from this native belief, he did not make any conscious effort to revise this opinion. It served the Spanish well as long as it lasted.

At first, the South Florida Indians appear to have held similar beliefs of the Spanish. But Fontaneda provides evidence that early contact between the Calusa and the Spanish had already transformed the Calusa conception of Europeans. He describes an encounter with a cacique who questions Fontaneda about recently shipwrecked Spaniards:

‘When we tell these, your companions, to dance and sing, and do other

things, why are they so mean and rebellious that they will not? or is it that they do not fear death, or *will not yield to a people unlike them in their religion?* [emphasis mine] Answer me; and if you do not know the reason, ask it of those newly seized, who for their own fault are captives now, *a people whom once we held to be gods come down from the sky*' [emphasis mine] ([1575] in Smith 1973:34).

Once held to be gods by the Calusa, sometime between initial encounters and Fontaneda's experience, the Calusa no longer viewed the Spanish as god-like. Perhaps because the South Florida Indians encountered the Spanish early on as shipwreck survivors and possibly also through unauthorized slave-raids of the Florida coast, their worldview had been re-shaped by the time Menéndez arrived on the Southwest Florida coast in 1566. Slave raids of Florida coastal communities had devastated villages. Additionally, refugees fleeing the Caribbean would already have spread information about the Spanish, European diseases, and their harsh treatment of the natives. Early Spanish explorers who used force and cruelty in demanding provisions from the native populations had made their mark. Upon Menéndez's arrival, the Calusa were cautious and soon openly hostile. The impacts from protohistoric European Contact had resulted in a revised native worldview that saw the Spanish as "the enemy" rather than "gods come down from the sky."

Menéndez, himself, was a product of mid-16th century Spanish culture. European views of New World natives had been shaped by the early dealings of the Spanish in New World affairs. Generally, religious efforts were overshadowed by the vast and seemingly boundless treasure of precious metals and stones and pearls which filled the Spanish Treasure Fleet. Conflicting agendas created a confusion of Spanish regulations which were also subject to change as outlined in Chapter 7. "Postcontact Impacts — Official Contact."

1. Possible evidence of syphilis in the New World prior to 1492 is limited and continues to be controversial. Endemic syphilis is believed to have been a New World disease whilst venereal disease either developed independently in the Old World or as an Old World response to New World endemic syphilis (Verano and Ubelaker 1992).

CHAPTER 7. -- POSTCONTACT IMPACTS -- OFFICIAL CONTACT

This chapter is organized by three parts, discussing first the atmosphere in Spain at the time of Columbus' first voyage to the New World. Spanish thought was heavily coloured by its own history. In addition, the Spanish Crown revised policies for the New World as they learned from their experiences in New Spain and Tierra Firme. The lessons they learned in these new Spanish colonies greatly affected future policy regarding *La Florida*.

The second part begins with Menéndez de Avilés first contact with the Calusa and carries through to the final efforts by Menéndez to secure a lasting peace with the Calusa. Menéndez interacted directly with the Calusa more than any other Spanish leader and his encounters with them were filled with tension. The Spanish decision to abandon efforts to convert the Calusa to Christianity occurred during this time and played a role in Calusa cultural continuity which lasted for nearly two centuries.

The third section chronicles the second mission to the Calusa in 1697 and the final mission in 1743. This era in colonial Florida is characterised by tension between the Spanish religious and administrative leaders. The depopulation of North Florida native populations resulted in a loss of labour and support for the Spanish. Looking to South Florida, Spanish religious leaders complained of a trading relationship between Spanish administrators and the Indians which they felt prohibited their efforts to establish missions there. Finally, in 1697, a second mission was established. Descriptions given by the Spanish illustrate a native culture still strongly attached to a traditional Calusa lifeway. By 1743, though, only a remnant band of natives identified themselves as Calusa during the final mission effort.

PART I: HISTORICAL ASPECTS OF SPANISH COLONIALISM

Reconquista

Spain invested ducats and decades in an effort to unite all of Iberia under the Spanish Crown. Spurred by religious conviction and supported by military might, the Spanish Crown fought the Muslim presence:

The history of medieval Spain was dominated by the long, arduous, and frequently interrupted march of the *Reconquista* -- the struggle of the Christian kingdoms of the north to wrest the peninsula from the hands of the Infidel (Elliott 1990:26).

Finally, in January of 1492, Ferdinand and Isabella conquered the city of Granada, completing the Reconquest and uniting Spain. Later that year and in the euphoria of the grand achievement, the Spanish Kings gave Columbus financial support for his proposed voyage. When he later reached the Bahamas, Columbus opened the New World and provided a new agenda for Spain: the Conquest of the New World (Elliott 1990:45).

Columbus' first voyage of discovery marked the beginning of official contact between Europe and the Americas. In many ways, the *Reconquista* set the tempo for Spanish policy in the New World. And despite the religious nature of the Spanish mission to Christianize native populations, this often conflicted with Spanish greed for New World wealth. In part, this was due to Spanish policy of rewarding *conquistadores* with the spoils of conflict. This resulted in the enslavement of native peoples in the New World which was initially supported by the Spanish monarchy.

Early Spanish gold mining efforts in the West Indies, New Spain, and Tierra Firme required huge amounts of physical labour. The Spanish turned to the enslavement of natives to fill

their labour need. This enslavement of natives was endorsed by the Spanish administration which based their decision on reports of such behaviour as cannibalism being practised by the natives. Reports of cannibalism by the Spaniards were not infrequent but probably represent Spanish labour shortages rather than widespread cannibalistic behaviour by the natives.

Through time, though, Spanish policy regarding the enslavement of native peoples of the New World changed. The plight of the enslaved native peoples was brought to the fore through the efforts of Bartolomé de las Casas and other religious leaders, and became the basis for a monarchical policy change which prohibited the future enslavement of native peoples.

The Inquisition

The end of the 15th century and the beginning of the 16th century brought religious reform to Spain which reflected the interest and efforts of Queen Isabella. At the same time, the Inquisition was established to deal, "...with New Christians who were suspected of having covertly returned to their old beliefs" (Elliott 1990:107). Under this pretense, the Spanish Inquisition soon blossomed.

By the 1530s, the Inquisition was firmly established in Spanish culture, preying on fears which fuelled the intolerance of unorthodox religious views. Imprisonment as well as economic and social ruin were punishments commonly meted out by the Inquisition whose cases often relied on informants never identified to the accused (Elliott 1990:218-9).

Fear bred fear, and it was a measure of the propaganda success of the Inquisition that it persuaded the populace to fear heresy even more than the institution which was designed to extirpate it (Elliott 1990:218).

Eventually, purity of blood became a requirement for holding office, entering a religious community or a secular corporation. This led to extensive research of family histories with an equal amount of zeal expended in efforts to blur or cover undesirable familial connections. Pedigree became an important component of Spanish society (Elliott 1990:223).

With these changes in tolerance came the end of Renaissance Spain and the beginning of a semi-open Spain of the Counter-Reformation (Elliott 1990:224). For the Franciscans, this time was considered to be the Golden Age of the Indian Church when the Franciscans had many powers, privileges, and influence in their efforts towards conversion of the natives. For the Franciscans, this also paralleled the reign of Charles I. The deterioration of these pro-Franciscan institutions began with Philip II in 1556 (Phelan 1970:41-43).

The establishment of the Inquisition reflected only one of many powers of religious reform. This reinforcement of religious zeal heightened the strength of the religious presence in the New World. Despite the pressure from Spanish soldiers and colonists seeking only wealth in the New World, religion played a large role in dictating the actions of the Spanish in the New World. The power and monetary position of the Church had for years remained outside the realm of the Spanish monarchy. Charles I succeeded in breaching this Papal power upon discovery of the New World by promising the Pope military support in Italy in exchange for the *Patronato*.

Patronato

The *Patronato*, which was decreed by the Pope, provided Spain alone with the necessary powers to establish the Church in the Indies. This *carte blanche* approval was intended to establish Catholicism in an efficient and timely fashion in the New World. But this breadth of power meant that religious direction in the New World was found in the Council of the Indies in Madrid -- rather than with the pope in Rome (Parry 1990:156-7). This created an entirely new religious structure that was under the direction of the Spanish Crown.

Armed with these religious powers provided by the Pope and the inspiration to convert the natives, the Spanish set out for the New World. But the new European awareness of New World peoples, cultures, and lands meant that theologians were consumed with the development of an eschatology that included the New World. Two main concepts which influenced the conquest of the New World centred on: 1) the civilisation of the Indians by the Spaniards, and 2) the conversion of the Indians to Christianity (Phelan 1970:5).

Geronimo de Mendieta, a Franciscan who spent much of his life in New Spain as a missionary, pursued a mystical interpretation of the conquest of the New World (Phelan 1970:1-6). References in the Old and New Testaments of the Bible were interpreted with a view towards Spain as the nation chosen by God to develop the millennial kingdom. Because apocalyptic views had been prevalent throughout the Age of Discovery, the Spanish saw an opportunity to convert "the world" by converting the natives of the New World as a step towards fulfilling biblical prophecies. Within this religious framework, the Spanish crown took on a religious aura and was seen as the religious leader for the conversion of these great numbers of people and therefore, a messiah (Phelan 1970:12-15 & 25).

Although overshadowed by these new religious concepts which addressed the New World, the hangover of the Reconquest continued to affect Spanish attitudes and actions. The militarism and religious fervour that characterized the Conquest was an echo of the Reconquest. Despite efforts by Columbus to establish a solely mercantile enterprise in the West Indies, the New World was soon under the military control of first Cortés who destroyed the Aztec empire and then Pizarro who destroyed the Inca empire. By 1540, these Spanish militaristic campaigns were over (Elliott 1990:61-63).

Cortés' defeat of the Aztecs made him a cult figure to Mendieta and others who interpreted his actions as a religious leader opening the New World for conversion to Christianity. And it helped that Cortés himself vociferously supported "... the conviction that priests should rigorously practice poverty, and a contempt for those who did not" (Phelan 1970:36). Because the Franciscans also believed strongly in following Francis' vow of strictest poverty, Cortés was an ideal Moses for the New World (Phelan 1970:29-38). The linking of a military leader with religious ideology only served to further entrench the militaristic approach of the Spanish in the New World.

New World Theology

Theologians continued to struggle to construct the position of the Native Americans within the Church. Some theologians felt the native populations were incapable of achieving full Christianity. Others thought they had a child-like innocence that required paternalistic guidance. Still others felt that the aboriginals could achieve earthly paradise.

Mendieta stressed the possibility of the Indians achieving terrestrial

perfection, if they were under the exclusive supervision of the friars. Mendieta thus converted the this-worldly inferiority of the Indians into an other-worldly superiority (Phelan 1970:46-7).

Their zeal in developing an earthly Indian utopia led to practical experiments such as in Mexico where the missionaries:

...set themselves with heroic dedication to the enormous task of grouping the Indians into villages, building missions and churches, and imposing a new pattern of civilization on their bewildered charges. The results were remarkable. Within half a century the Mexican Indians had assimilated the superior techniques of their conquerors, and displayed a receptivity to European culture which had no parallel in other parts of Spain's colonial empire (Elliott 1990:71).

Not all believed in the potential "perfection" of the natives in the religious realm. Phelan states that:

More typical of the majority view was that of Pedro de Azuaga. . . . Azuaga attributed the ready acceptance of the True Faith on the part of the Indians to fear rather than positive conviction. Azuaga saw the Indians as timid, opportunistic and hypocritical. Without some Spanish military power Azuaga argued that the Indians might eject the friars and repudiate Christianity (Phelan 1970:46-7).

But it was clear to the Franciscans from the outset that the successful conversion of the natives was based on the ability of the friars to establish and maintain much control over the natives. To that end, they believed that the natives should be segregated from the Spanish whose negative influences and exploitation of the natives were a barrier to their conversion (Phelan 1970:57-8). A paternalistic attitude towards the natives was very quickly established with the characteristic of childlike innocence applied to them (Phelan 1970:59-68). This was to become an overriding theme.

The actual missionary efforts to convert the natives was earthbound and thus faced issues

of Spanish policy. More important to the Spanish Crown was the survival of its colonists rather than the conversion of the natives. These competing needs created a constant tension within the Spanish colonies of the New World.

Council of the Indies

In 1524 the Council of the Indies was established and given administrative, judicial, and ecclesiastical power in matters relating to the Indies. Viceroys governed on a local level in the New World, but were limited in certain powers. Issues requiring a higher authority were submitted to the Council of the Indies by the viceroy. The council provided a summary of the issue and the stance of the council members to the king who would either agree with the council's direction or refer it to the Council of the State for further discussion (Elliott 1990:174-177). In fact:

No States were more governed in the sixteenth century than those of the King of Spain, if government can be measured by the amount of discussion devoted to any individual problem and by the quantities of paper expended on its solution (Elliott 1990:177).

The introduction of the Council of the Indies, though, produced delays in decisions due to the sheer distances involved. And the elaborate system of checks and balances resulted in an overall powerlessness of each participating review body (Elliott 1990:177).

In addition, corruption was an allegation often levelled at members of the various councils. Mean salaries for these councillors was in theory an incentive for them to work all that much harder in order to receive rewards or *mercedes* from the king. Instead, many resorted to irregular money-raising efforts to meet social obligations when salaried means proved infeasible (Elliott 1990:179-181).

Ultimately, the Council of the Indies required that all issues of significance be submitted for review in Spain. Whilst established solely for the purpose of maintaining a consistent and coherent control of the Indies by assisting the Spanish monarch, instead, the Council of the Indies resulted in colonial chaos as those in the Indies awaited slow replies or received infeasible instructions. Therefore, often actions were taken before official word arrived. And if official decrees did not match the actions taken in the interim, the decrees were frequently ignored.

Spanish Colonial Settlements

In the New World, the Spanish missionaries built new towns with churches and convents for the urbanization of the Indians in order to: 1) isolate them from Spanish colonists; 2) provide them with religious instruction; 3) develop communal agricultural pursuits; and 4) maintain ecclesiastical supervision (Parry 1990:162). To accomplish these objectives in New Spain and Tierra Firme, the friars destroyed existing native temples, shrines, altars, and idols. The idols, "...were systematically broken, either smashed with hammers or rolled down the pyramid faces" (Parry 1990:161). The Spanish quickly filled the void left from the destruction of native religious structures by building new religious buildings, often using the same location.

Spanish missionaries tried to gain Christian converts through the use of worldly goods:

In the initial entrada or misión stage, Franciscans often sought to dazzle natives with showy vestments, music, paintings, statuary of sacred images, and ceremonies. They often won native people over with gifts, such as hawks' bells, glass beads, hatchets, knives, scissors, cloth, and clothing. As a missionary in Florida explained, 'This world is the route to the other...gifts can break rocks.' Gifts of food were especially effective...[as] the acceptance of gifts established a sense of obligation and reciprocity

(Weber 1992:107).

The missionaries moved into Indian villages, enlisted the natives in building a church and friary. If the native population was spread across the landscape or the nearest village far from the reach of the Spaniards, the missionaries would enlist the natives in the building of a village to concentrate the native population. A concentrated native population was much easier for the missionaries in reaching as many natives as possible.

Dedication to the task of teaching Christianity even led to novel architectural designs. In New Spain, to better reach new converts, the friars developed the *atrio*, "...an extensive walled courtyard, with open chapels facing inward at intervals along the wall" (Parry 1990:163). This new architectural design was capable of handling large crowds of people which resulted from the urbanization of native populations.

The acceptance of Christianity by Native American cultures had recognizable benefits for the natives. Cooperating with the missionaries led to gifts and access to Spanish trade goods and foods which lured many natives -- at least as long as the flow of material goods lasted. They also saw the Spanish as potentially powerful allies against their foes.

But the missionaries also wielded what the natives saw as tremendous spiritual power.

Like Christians, many North American Indians believed that priests and ceremonies had power to mediate between man and nature, and Franciscans claimed such power as they conjured cures, rain, and good harvest (Weber 1992:116).

In addition, the Christian Spaniards were not as vulnerable to the deadly diseases which

killed vast numbers of Native Americans. Under such conditions, the Spanish religious leaders appeared very powerful.

This acceptance of Christianity was probably never *wholesale*. Instead of discarding their religion or way of life, the New World natives chose aspects of Christianity which were compatible or could be added to their own belief systems. But when the gifts dried up and the natives continued to die from epidemics despite the conversion of natives and the prayers of the missionaries, the power of the missionaries to hold sway over the natives waned.

The urbanization of native populations proved ultimately fatal for many. Epidemics swept through these urban settlements which were now exposed to European diseases for which they had no immunities.

Colonisation and the transplanting of Spanish institutions in Mexico and Peru followed military defeat of the natives (Elliott 1990:67). But the Spanish view of land ownership in the New World did, in fact, include consideration of aboriginal rights to land.

From the legal point of view it was early established that the Indians were the proprietors of all lands which they possessed and cultivated at the time of the Spaniard's arrival, while the rest of the land and all the sub-soil became the property of the State. The Crown would be expected to share out this land to the *conquistadores* as a reward for their services, following precedent already established in medieval Castile (Elliott 1990:67).

The establishment of incorporated Spanish towns in the New World was an important step towards permanent land ownership for the Spanish (Elliott 1990:67). With officially incorporated towns, the newly-arrived Spanish could expect to be given uninhabited or uncultivated lands in the New World by the Crown and have legal title to it. These colonial

towns were:

...the centres of a colonist population, which expected to live in style according to the domestic and gastronomic standards of the upper classes in Castile; and the colonists were dependent for the subsistence on a countryside that was worked with the labour of the conquered Indian population. The legal possession of the land was thus from the start bound up within the problem of jurisdiction over the people who were to work it (Elliott 1990:68).

Spanish thought and legislation was predicated on the concept of the Indians as free people.

But there were limitations to this freedom, especially with respect to religion:

It certainly did not mean freedom to hold and practise false religion, once the true religion had been revealed (though the bishops treated Indians far more leniently in this respect than they did Spaniards, and the Holy Office in the sixteenth century had no jurisdiction over them). Nor -- and this was the crucial point -- did liberty mean freedom to be idle, to be left to one's own devices, to refrain from making any contribution to the well-being of society and the revenue of the Crown (Parry 1990:174-5).

This provided Spanish colonists a certain amount of opportunity for gaining access to slave labour, at least in the early stages of Spanish colonialism in the New World.

The survival of Spanish settlements in the New World, though, was dependent upon aboriginal labour. The Reconquest had resulted in the concept of a 'just war' and the right of the victor to enslave the conquered population (Elliott 1990:68-69). This concept was also transplanted in the New World to the advantage of the Spanish.

The Spanish were subject to certain policy in their dealings with the natives:

The Spaniards, for their part, must behave as Christians, offer peaceful trade, refrain from provoking resistance and present the Gospel fairly. The Indians would not incur penalty of conquest merely by rejecting the Gospel after hearing it; but refusal to hear, refusal to admit strangers, unprovoked attacks on traders or missionaries -- any of these offences would at once give the

Spaniards just ground for war and conquest (Parry 1990:141).

The position of some religious leaders showed support for the use of native labour. Phelan states that:

The mendicant moderates admitted that the laymen were entitled to expect a decent standard of living in a manorial economy based upon Indian labour. The natives were to be made to work, but they were not to be exploited harshly or unreasonably. The economic situation justified the possibility of a *modus operandi* among the friars, laymen, and Indians (Phelan 1970:102).

Both Church and State opposed such systems as the *encomienda* (see discussion below) which was quickly developing into a feudal aristocracy no different than medieval Spain. The Spanish Crown was well aware of the difficulties of controlling such a system and sought to curb this system. On moral grounds, religious leaders were concerned about the Indians. Those protesting the enslavement of aboriginals were often the religious personnel who sought to Christianize the native populations. Finally, in 1500, Isabella formally prohibited the enslavement of Indians.

Exceptions were made, however, for Indians who attacked Spaniards, or who practised atrocious habits such as cannibalism, and [for example] Cortés had no difficulty in finding pretexts for the enslavement of numerous men, women, and children (Elliott 1990:70).

Bartolomé de las Casas was instrumental in bringing to light the mistreatment by the Spanish of Indians in the Americas. He sought to spread the message that:

...the Indians, being subjects of the Spanish Crown, should enjoy equal rights with the Spaniards; that they were intellectually capable of receiving the Faith and should be gently instructed in the ways of Christianity under the government of benevolent officials; and that the colonists should support themselves by their own efforts and had no right to enforced Indian labour (Elliott 1990:73).

Enslavement of New World natives under any pretext was prohibited in 1530 by royal

decree. Although it was revoked four years later, it was renewed again in 1542. The New Laws of the Indies established in 1542 reduced and greatly restricted colonial settler's privileges (Parry 1990:182). The general prohibition of the enslavement of Indians led to the *encomienda* system whereby the protection and religious instruction of the Indians was exchanged for labour or tribute (Elliott 1990:70). Demand for labour never waned and instead grew so that the *encomienda* system often became a burden no less than slavery.

In New Spain, a labour system known as *repartimiento* replaced the *encomienda*. *Repartimiento* was a system of forced paid labour which required natives to work in mining or agricultural activities for short intervals in return for wages. Indian settlements were required to supply a percentage of their male population to provide labour for public works. A rotation was devised so that after a period of time, the workers would be replaced by another group from the same settlement (Parry 1990:186-7). Aspects of the *repartimiento* system resulted in continued abuse of the aboriginals. Seen as slavery by the friars, this system of cheap native labour was based on the premise that it was economically necessary in order to avoid famine. Mendieta concluded that the adoption of maize would equally solve the shortage of foodstuffs preferred by the Europeans, and that only greed was behind the *repartimiento* system (Phelan 1970:97-102).

Whilst the Spanish were not allowed to live in Indian villages, Indians were still required to work for the Spaniards. Most of the friars contested the teaching of Spanish to the natives, arguing that it was not necessary to speak Spanish in order to be good Christians. Mendieta went so far as to find Hispanicization of the Indians and their Christianization *mutually exclusive*. With the difficulties of teaching Christianity, the exposure of the Indians

to Hispanicization only created havoc and prevented Mendieta from attempting to build a terrestrial paradise. But Hispanicization could only be delayed -- not halted (Phelan 1970:86-89).

Mendieta adopted the Dominican stance regarding *repartimiento*, disavowing the exploitation of native labour under any circumstance. But the natives continued to suffer diminishing numbers under the *repartimiento* system which further alarmed the Spanish.

By the 1590s,

The anti-Franciscan spirit animating the Council of the Indies, the Crown's policy of Hispanicizing the Indians, and countless epidemics, and the exploitation of native labour through the *repartimiento* system were considered by Mendieta the decisive factors which unleashed the great time of troubles which enveloped the Indian Church (Phelan 1970:81).

Mendieta and other Franciscans fell further into the dark atmosphere of apostolic doom (Phelan 1970: 103-108). For Mendieta, "The New World is the End of the World" (Phelan 1970:110).

Hence in the seventeenth century there was a noticeable decline in the morale, discipline and effectiveness of the Franciscans in New Spain. It was not until the early eighteenth century that the Franciscans renewed their evangelical enthusiasm, this time, on the expanding frontiers of New Spain (Phelan 1970:109).

This spiritual renewal was not to occur until the latter efforts to colonise *La Florida* by the Spanish.

Native numbers dwindled further as a result of European diseases. Two major epidemics decimated the native population of New Spain. The first and most devastating was during 1576 - 1579. By the second major epidemic from 1595 - 1596, Mendieta had turned his

thought away from terrestrial paradise and towards apocalyptic doom. Mendieta blamed the epidemics and resulting losses of numbers of natives on Spanish greed and exploitation of the natives. Once exterminated, Mendieta felt the Spanish would no longer have a cheap source of labour -- thus punishing the Spanish for their actions against the natives (Phelan 1970:93-4).

The impacts to native populations devastated by losses from European-introduced diseases cannot be overstated.

Disease not only took native American lives but demoralized grieving survivors and weakened their resolve to resist if not to live. The same diseases that devastated and dispirited Indians raised the spirits of Europeans and strengthened their faith in a divine providence (Weber 1992:28).

The epidemics of the earlier part of the 16th century had been a contributing factor in the sense of hopelessness felt by the religious people which had travelled to the New World to Christianize the Indians. Their charges quickly fell ill when exposed to European diseases. Rather than teaching Christianity, they were soon trying to convert and baptize natives before they succumbed to illness.

Spanish Settlements in Florida

Once settled, *La Florida* was not to be administered by the Spanish in the same way that New Spain and Tierra Firme had been. Early attempts to settle Florida were perilous and often failed. The first Spaniard to attempt settlement in *La Florida* was "discoverer" Ponce de Leon who investigated the southwest Florida coast in 1512. Later, in 1521, he travelled to *La Florida* in order to establish a Spanish settlement. Hostile Calusa Indians mortally wounded Ponce who returned to Havana without having established a settlement.

Following Ponce de Leon's disastrous attempts to settle the Southwest Florida coast, the King of Spain invested Lucas Vásquez de Ayllón in the Order of Santiago which allowed him the right to the conquest and colonization of the provinces of Chicora and Duharhe on the east coast of Florida. But a critical part of the articles was the prohibition of the enslavement of native populations:

We have petitioned to the effect that Indians cannot, with good conscience, be placed in *encomiendas*, nor given out in allotments for provincial services. Also, it has been shown by experience that this practice has caused considerable damage, desolation among the Indians, and depopulation of the island and established settlements. Therefore, it is decreed: That in the land in question there shall be no allotments of Indians made, nor shall they be constrained to be employed in personal services, unless willingly and voluntarily on their part, and with pay, on the same basis as our other free subjects and working people in these kingdoms. I order that thus it be done, and that you carefully attend to this, and to the fair treatment of the Indians (Barcia [1723] 1970:6).

Therefore, prior to the actual establishment of any Spanish colonies in Florida, enslavement of the native populations of Florida was prohibited by the Spanish Crown. This was a crucial change in Spanish policy that was to be challenged in later years by Menéndez de Avilés.

Still, settlement efforts were unsuccessful and as the years passed, it became more and more important for the Spanish to establish a foothold in Florida. Losses from shipwrecks continued to mount and European rivals began to threaten the Spanish control of the New World.

One of the problems for Spanish settlement was rooted in the fact that the Indians highly valued European trade goods, but they quickly turned hostile when all trade goods had been distributed. They valued European goods but did not become dependent upon them.

Indian hostilities in Florida resulted in Spanish aggression. Pedro Menéndez Márques described his interactions with the Indians near St. Augustine in a letter written in April of 1579:

After his Majesty sent me the succor which I had entreated him to send, I set about overrunning the country of the enemy who had done the damage in these provinces, and in forty-five leagues of their land which I overran, I burned nineteen villages. And some Indians were killed, without my receiving any injury beyond two soldiers being slightly wounded. Great was the harm I did them in their food stores, for I burned a great quantity of maize and other supplies, and I finally learned the secret of the Frenchmen who were among them in the land. I find that there are twenty-four, not more, whom I desire extremely to get into my power, so that they shall not sow their evil teaching among these people; and for this I have need of the horses for which I am asking, because to think of overtaking these Indians on foot is impossible; and if I have horses they can be caught, and the French can be had. In this province of St. Augustine the people are peaceful, and although they were so previously, they are much more so now since they have seen the war I made on the other Indians. May it please our Lord that they may some time become good and Christian, for at present there is no discussing that. They say flatly that they do not wish to become so, especially the adult men and women, who say that their fathers and ancestors had that religion; that they must preserve it; that if the young people wish to become Christians, they may; that they will not give up their faith. But if we ask them for their children in order to teach them the doctrine, they will not give them, and so there will be no fruitful results whatsoever in this land until our Lord takes a hand in this, for great is the pity that there should be lost so many souls as are lost here... (Márques [1579] in Connor 1930:225-6).

Also problematic was the cost of supplies for the colonists. In the West Indies, the prices were so high that Pedro Menéndez Márques in 1578 directed that as it was possible that money be taken to Spain and provisions purchased there (Márques [1579] in Connor 1930:41). Spanish colonists in Florida were desperate in 1579, when the Viceroy of New Spain agreed to grant a license to the Treasurer of Florida to buy flour and biscuits from New Spain due to their suffering from a need of provisions (Márques [1579] in Connor 1930:219).

In St. Augustine, they reportedly were able to grow maize as well as:

...figs, pomegranates, oranges, grapes in great quantities; there are many mulberries from the mulberry trees produced in this same soil, vegetables and greens in large quantities, such as beans, kidney-beans, melons, pumpkins, lettuce, cardoons, onions, and garlic; all of this in abundance, in such manner that I assure your Highness that if there were those who would farm the land, it is ready for it (Connor 1930:227).

With this vast range of foods, it would seem improbable that the Spanish were truly starving. But wheat and wheat products which they were used to would have been in short supply as they were unable to grow wheat easily in the Florida environment. The Spanish did not adapt readily to New World foods.

Missionaries were steadfast in their desire to teach Christianity amongst the native Florida cultures without the advantages or disadvantages of a Spanish military presence. This led to a history of martyrdom in *La Florida* where natives frequently killed unguarded missionaries.

The 1549 slaughter of three missionaries in Florida led in 1550 to a reconsideration of the approach of religious conversion without military protection, noting that:

...the heretics tended to settle in those places where it was necessary for religious to be armed in defense against its enemies, to protect that uncultivated vineyard from the diabolic weed being sown, and to hold the Indians, whose fickleness caused them to serve and respect most those who gave them the most presents (Barcia [1723] 1970:27).

At issue was the presence of the heretical French (Lutherans). The French tried to secure the alliance of the natives present on the east coast of Florida. Under these conditions, it was considered necessary for the Spanish missionaries to maintain a military presence since the

aboriginals were swayed by French influences and considered the Spanish their enemy as the Spanish were enemies of the French.

PART II: MENÉNDEZ AND THE CALUSA

With the threat of French presence in the New World, Charles V commissioned Menéndez de Avilés to pursue corsairs in the Indies. Subsequently, Philip II appointed him captain general of the Indies fleet (Barcia [1723] 1970:62, 69). Menéndez's first efforts involved the mapping of the Florida coastline as required by his commission and searching for his son who had been shipwrecked on the Florida coast. Mapping of the coast was intended to alleviate the problem of incessant Spanish shipwrecks along those coasts. Menéndez was also charged with establishing a settlement in Florida (Barcia [1723] 1970:69-70).

By the time Spain began to explore Florida, more than a half century had already passed from Columbus' first voyage to the New World. During this time, Spain had gained many experiences in interacting with native peoples and had already revised certain policies as noted in Part I of this chapter.

Spain continued to approach the conquest and colonization of the New World as both a public and private venture. Each *conquistador* was issued a document known as the *capitulación* which reserved rights for the Spanish Crown, but also provided rewards to the *conquistador*. Through these agreements, Spain was able to transplant medieval Spanish municipal organization to the New World (Elliott 1963:60), maintaining royal control despite the heavy involvement of private venture.

The articles of agreement in Menéndez's *capitulación* required him to outfit the ships all at his own cost. In addition, he had three years in which to conquer and take possession of Florida. Surveying and mapping of the coast of Florida was also to be undertaken in addition to a settlement of 500 colonists and two or three villages with forts. Twelve religious and four priests were also to be brought to Florida. Livestock for the colonists was to be provided by Menéndez as well. All in all, details were carefully spelled out in the articles of agreement (Barcia [1723] 1970:70). In return, Menéndez was given the title "Adelantado of Florida" by the King of Spain and was to receive 25 square leagues of land and the governorship of Florida (Barcia [1723] 1970:71).

The newly-discovered French presence in Florida resulted in the King's order that Menéndez leave immediately for Florida to oust the Lutherans, and the King provided additional soldiers for that purpose. Menéndez rushed to arrive in Florida before the French who courted the Indians to their cause received reinforcements which were on their way (Barcia [1723] 1970:71).

The Spanish strategy involved in the conquest and colonisation of La Florida included:

- 1) protection of shipping lanes; 2) missionization of natives; 3) establishment of overland road or east-west riverine access across the Florida peninsula; and 4) prohibition of encroachment by other European powers (Milanich 1990:16).

In 1565, Menéndez sailed from Spain with 995 persons, including sailors, soldiers, religious people, and craftsmen (locksmiths, millers, silversmiths, tanners, cloth shearers, and others) (Barcia [1723] 1970:73). On August 28, 1565, St. Augustine's Day, Menéndez reached the east coast of Florida. Menéndez set out with his entourage to locate the French and remove

them (Barcia [1723] 1970:75).

Routing the French

Within less than a month on September 21, 1565, Menéndez took command of the French fort which was named Fort Caroline. Menéndez renamed the fort as San Mateo and left soldiers there to man the fort. Soon thereafter, the fort accidentally burnt and was never rebuilt (Barcia [1723] 1970:86-89). As Fort Caroline was routed, French reinforcements under Jean Ribault were shipwrecked to the south on Florida's coast.

Menéndez learned of Ribault's ill fortune and marched south, finding the shipwrecked French reinforcements on the beach. Most of the shipwrecked French were executed by the Spanish with the exception of a few craftsmen, fifers, drummers, trumpeters and those who professed to be Catholic. Facing a crisis from the lack of provisions, some argue that Menéndez's actions were humanitarian since they faced imminent starvation (Barcia [1723] 1970:90-1, 96).

Twenty days after this massacre, Menéndez learned of escaped Frenchmen building a fort and boat. Finding them near Cape Canaveral, Menéndez burnt their fortification efforts (Barcia [1723] 1970:96-7). French efforts to establish themselves in La Florida had been efficiently and effectively thwarted.

Searching for a waterway crossing of Florida peninsula

One of the most important aspects of Menéndez's travels in La Florida involved a search for a way to cross the Florida peninsula using riverways. The tremendous loss of Spanish ships

on the Florida coasts, especially along the southeastern coast, resulted in an increasing interest in discovering a way to avoid that area altogether. Rivers could provide an alternative route to the dangerous Bahama Channel. Menéndez set out to investigate the St. Johns River to discover whether or not it would lead him across the peninsula and directly to New Spain.

Inland from Fort San Mateo, Menéndez travelled up the St. Johns River to search for any such crossing to New Spain. In these efforts, however, interior Indians deflected his investigations. “In a point where the river narrowed, he came upon a barricade made of earth and stakes” (Barcia [1723] 1970:127). Whilst the Spanish broke through the barricade, they did not travel much further out of fear that the Indians might easily gain an advantage with the further narrowing of the river (Barcia [1723] 1970:127). Menéndez then sailed to Havana, leaving soldiers at St. Augustine.¹

Once in Havana, many of the people who had travelled to the New World to help colonise a Spanish settlement in Florida deserted. Because Spain limited the number of people who could go to the West Indies, these “colonists” used the opportunity to reach the West Indies by voyaging with Menéndez only to desert once they reached Havana. The West Indies were controlled by the Spanish and promised gold, sugar cane, and other opportunities for intrepid Spaniards. This problem plagued Menéndez just as it did others who sought to establish settlements in Florida. Even many in the religious community dodged Florida. Soldiers established in various fortifications in Florida deserted their posts which also caused a constant problem for Menéndez who sought to recover them (in Havana) and return them to their posts.

From Havana, Menéndez left with about 200 soldiers and sailors for the Southwest Florida coast on February 10, 1566 to search for anchorage and good navigation between the Tortugas and the Florida Keys (Barcia [1723] 1970:101). Establishing peace with the aboriginals living along those coasts was paramount to Menéndez who viewed such peace as critical to the safety of Spanish movement in the area. A possible waterway route across peninsular Florida was also important to Menéndez who felt that the dangerous waters of the Bahama Channel could be avoided by such a route. The St. Johns River of the east coast led inland and this encouraged Menéndez who hoped to discover a waterway route along the southwest Florida coast leading inland to the St. Johns River.

Eight days later, Menéndez reached the southwest Florida coast and the Calusa. His search for shipwrecked Christians was rewarded immediately. Fontaneda, a Spanish shipwreck survivor held captive by the Calusa for 14 years, canoed out to the Spanish ships. Dressed and painted as an Indian, he spoke Spanish to them and begged them to rescue him and other captive Christians (Barcia [1723] 1970:102).

FIRST ENCOUNTER

Altogether, Menéndez carried approximately 60 men in two of the shallower draft boats able to sail close to the coast. Menéndez sent Fontaneda to Carlos with the message that he had jewels for him and his wives. Carlos arrived the next day with 300 Indian archers and Menéndez disembarked with 30 arquebusiers with lit match cords (Barcia [1723] 1970:102).

The meeting was placid with Menéndez giving Carlos Spanish attire along with some

trinkets for the women and Indian chiefs present. Carlos gave Menéndez a silver bar worth two hundred ducats in weight (Barcia [1723] 1970:103). The sight of precious metal was met with much hopefulness by Menéndez's men.

The Spanish provided honey and biscuit for repast. Carlos asked for more Spanish food and gifts which provided Menéndez with an opportunity to entrap Carlos. Menéndez said that he did not have enough for all of the people present, but that if he wished, he could come aboard with some of the chiefs and his wives for more food and gifts.

Carlos swallowed the bait. The Spanish ships were immediately let further out to sea and the Indians were calmed by being told that Menéndez feared that other Indians would swamp the Spanish vessels by trying to come aboard at such a close distance to shore. After satisfying their appetites, Carlos was ready to leave, but Menéndez stopped him and stated that:

...the King of Spain, his master, had sent him for the Christians held captive under threat of death if he did not bring them back. He entreated the cacique to hand them over, and said that in exchange for this favor he would give many presents and would become his friend and brother (Barcia [1723] 1970:103).

While Carlos agreed to hand over captive Christians, Menéndez would not release him until the Christians were aboard. Within an hour, four women and three men were brought to Menéndez who gave Carlos more gifts and released those Calusa on board (Barcia [1723] 1970:103).

Carlos volunteered to bring to Menéndez more Christians who were inland and invited

Menéndez ashore the next day to see his wives (Barcia [1723] 1970:103). No doubt stinging over the Spanish use of him as a hostage, Carlos planned his revenge.

The following morning, Carlos sent canoes to bring Menéndez to him while secretly planning to kill the Spanish. Shipwreck survivor, Fontaneda, managed to reach the Spanish and warn them of the plan. Those in the canoes fled when it appeared that their plan had been foiled. Menéndez pretended to be unaware of Carlos' plans and moved his ship close to shore, signalled, and waited for the Calusa to send canoes to take him to see Carlos. When none arrived, Menéndez left port in search of his remaining ships which had stayed in deeper water.

Searching northward for the ships, Menéndez did not find any sign of them and instead, found them upon his return to the harbour where the Calusa lived. The Calusa had peacefully traded 2000 ducats' worth of silver with the 100 Spanish soldiers found on the five ships during Menéndez's absence.

European Material Culture in the Calusa Society

The biggest source of European material culture to South Florida natives was entirely unintentional. The introduction of precious metals from Spanish shipwrecks had one of the largest impacts on Calusa material culture. South Florida natives salvaged the cargo from Spanish shipwrecks along the coast. The very silver traded to Menéndez's soldiers had undoubtedly been salvaged from a Spanish shipwreck on Florida's southern coastline.

Not only were precious metals shipped in the form of coins minted in Mexico, but

additionally, as metal artefacts from native South and Central American cultures which landed on Florida shores.

Many of these metals were re-worked into South Florida native designs and motifs (see Chapter 4. “Florescence of Calusa Culture in Time and Space”) whilst others were maintained as they were found when they were salvaged, particularly artefacts from other cultures. The geographical distribution of many of the metal artefacts are found within the Calusa area of influence (Milanich 1995:48). It is reported that the Calusa chief had his choice of shipwrecked items with the remainder divided probably amongst lesser chiefs.

It appears that metal artefacts were associated with high status individuals (especially those in tablet form as shown in Figure 29). The inclusion of these precious metal artefacts within the Calusa culture would have served to reinforce social status. Symbols associated with artefacts would have linked this status with control over ideology. Overall, these precious metal artefacts were powerful pieces of Calusa material culture.

European materials purposefully taken to South Florida as gifts to the natives include provisions which were often stored in olive jars and clothing, beads, scissors, knives, bells, mirrors, hatchets, machetes, fishhooks, sickles, adzes, nails, and iron were given to the Calusa (Milanich 1995:44-5). It is not clear what role these artefacts played within the Calusa society. They seem to have been absorbed into the Calusa culture rather than being appropriated. As novelty items, they may have served as heirlooms and on a smaller scale, may have conveyed status to the owner. It is important to note that after these items were given to the Calusa by early Spanish explorers and missionaries, it was roughly 150 years

before the Spanish re-established a regular line of communication with the Calusa and in that time period, these items may have lost their usefulness as tools and/or sources of status.

SECOND ENCOUNTER

Menéndez continued to pretend not to know about Carlos' earlier plans to kill the Spaniards, and Carlos eagerly sought more Spanish goods from Menéndez. In addition, it appeared that Carlos had changed his attitude towards the Spanish:

He told Menéndez that he wanted to adopt him as his elder brother in order to be at his command; as wife he wanted to give him an elder sister whom he loved dearly, so that the Adelantado might take her to a land of Christians, and then bring her back, whereupon he and all his vassals would become Christians, since that seemed best to him (Barcia [1723] 1970:103).

Menéndez gave Carlos more presents, and Carlos invited Menéndez to receive his sister the next day and see his wives and village.

The Spaniards with Menéndez at that time believed that they should hold Carlos hostage for great riches that the cacique controlled. They argued that the Calusa did not value gold and silver since in bartering,

...one Indian gave a piece of gold worth seventy ducats for an ace of diamonds, and another gave half a bar of silver, worth more than one hundred ducats, for some scissors (Barcia [1723] 1970:104).

The Spaniards reckoned that they could gain much from the Calusa who recovered precious metals from Spanish treasure shipwrecks along Florida coasts (Barcia [1723] 1970:104).

To many of the Spaniards who travelled to the New World, the pursuit of treasure was foremost. These men constituted Menéndez's crew.

But Menéndez did not wish to deceive him and instead let Carlos leave when he wished. Perhaps to Menéndez, peace was much more dear than silver and gold. He was still interested in ransoming shipwrecked Christians and investigating the possible waterway crossing of the Florida peninsula.

THIRD ENCOUNTER

The following day, Menéndez landed with 200 harquebusiers and marched to Carlos' house.

Obviously, his tactics included drama:

He brought flag, two fifes, drums, three trumpets, harp, a violin, a psaltery, and a very small dwarf -- a great singer and dancer -- whom he always took with him (Barcia [1723] 1970:104).

The Calusa showed him into a building large enough to hold 2000 people without crowding. It is estimated that 4000 Calusa were on hand for the event (Reilly 1981:405-7). Carlos showed Menéndez great respect as did other Indians present. And Calusa finery, military might, and communal singing and dancing impressed the Spaniards. By all appearances, Carlos had adopted a peaceful and respectful attitude towards Menéndez (Barcia [1723] 1970:104).

Carlos had pledged his sister to Menéndez in marriage. She was introduced to Menéndez and she appeared to be approximately thirty-five years of age and was described as, "...not handsome, although she was quite dignified" (Barcia [1723] 1970:104). Named by the Spanish as Doña Antonia, she became a well-versed pawn in the relationship between the Calusa and the Spaniards.

The Politics of Dynasties: An Arranged Marriage

Sophisticated political parlaying by the Calusa at the time of contact cannot be ignored. The forced marriage of Carlos's sister, Dona Antonia, to Menéndez provides an example of Calusa political savvy.

Menéndez de Avilés was the first European to successfully interact with the Calusa Indians (earlier Europeans had been unable to do more than flee from the war-like Calusa). This was possible because 1) the Calusa viewed the Spanish as adversaries, and then by their chief, Carlos, as a powerful potential ally; and 2) the Spanish had a great interest in converting the Indians to Christianity, Carlos was able to force a marriage between his sister, Dona Antonia, and Menéndez (Reilly 1981).

After pretending an interest in Christianity despite an obviously tense and potentially hostile first meeting, Carlos offered his beloved sister to Menéndez in marriage so that, according to Carlos, she could learn the ways of Christianity and become a Christian. Carlos made vague promises that once she became a Christian, the rest of the Calusa would embrace Christianity.

At the thought of converting so many Indians under such circumstances, Menéndez was urged by his advisors to go through with the marriage despite the fact that he had a wife in Spain. Menéndez was reluctant, but the marriage took place. In fact, marriages between Spaniards and elites was initially encouraged in an effort to gain eventual control of Indian groups (Deagan 1985:308). Intermarriage between Spanish and Indians may have had a profound effect on aboriginal culture change in some areas of the New World (Deagan

1985:289).

Carlos' plans, though, had more to do with tribal power than European "enlightenment." Carlos was under constant challenge from a Calusa Indian known to the Spanish as Don Felipe who considered himself the rightful heir to the chieftanship. For Carlos, this caused a turbulent reign -- particularly under difficult circumstances. For Carlos, the Spanish were a powerful enemy that, under the right circumstances, could be turned into a powerful ally against Don Felipe.

The marriage of Carlos' sister to Menéndez provided the circumstances for alliance. In fact:

. . . Through the marriage, Carlos must have hoped to gain some control over the use of Spanish power within his realm, enabling him to keep his domestic enemies in line. In addition, a child by this marriage would have had political potential within the tribe as long as the alliance with the Spanish lasted... Domestic politics seem to have been paramount (Reilly 1981:410).

On this point, Carlos finally achieved success as Menéndez retired to the harbour, taking Doña Antonia along with accompanying Indian men and women. At the harbour, Doña Antonia was dressed in Spanish attire and baptized. The following day, she sent messengers to Carlos who immediately went to the harbour to see her (Barcia [1723] 1970:106).

Menéndez made his next move, asking that Carlos put a large wooden cross in front of his house so that the Indians could worship at it. In addition, he wanted Carlos to destroy the aboriginal idols. Carlos agreed to put up a cross, but argued that he would not destroy the aboriginal idols until the return of Doña Antonia from Havana (Barcia [1723] 1970:106).

It became apparent to the Spanish at that time that there existed a power struggle amongst the Calusa. The Spanish described one Calusa Indian, a captain, as having more authority than Carlos: this was Don Felipe (Carlos' wife's brother who was married to a sister of Carlos). This Calusa man, Don Felipe, vowed to protect the Christian cross and ensure its worship by the Calusa (Barcia [1723] 1970:106).

This rivalry between Carlos and Don Felipe may have been the major impetus behind Carlos' insistence on Menéndez marrying Doña Antonia.

Through the marriage Carlos must have hoped to gain some control over the use of Spanish power within his realm, enabling him to keep his domestic enemies in line.... Domestic politics seem to have been paramount (Reilly 1981:410).

It is difficult to know whether Carlos' main concern was with Don Felipe or with containing the ranks of restless vassals who switched their allegiances between the major powers.

Menéndez left Calos, accompanied by Doña Antonia and 7 Calusa Indians. The group travelled to Havana where the Calusa were to be instructed in Christianity (Barcia [1723] 1970:109). But 1566 had only begun for Menéndez.

The adoption of Spanish lifeways by Doña Antonia occurred quickly. Doña Antonia and her Calusa companions arrived in Havana, and during this time, Menéndez was busy dealing with hostile Indians on the east coast of Florida and rebellious and mutinous soldiers and sailors before returning to Havana. In his absence, Doña Antonia was baptized after learning Christian doctrine. She lived in the house of a councilman whose wife served as Doña Antonia's godmother (Barcia [1723] 1970:121). The councilman found that Doña Antonia

was:

...very discreet, and that her dignity, and her prudence even more, caused her to be admired by the entire city, for in a few days, together with a maidservant of hers, she had learned her prayers and Christian doctrine (Barcia [1723] 1970:121).

But Spanish Havana was an unhealthy environment for the Calusa who like all Native Americans lacked resistance to European diseases. During their stay in Havana, all but two of the Calusa Indians accompanying Doña Antonia died. For Menéndez, the problem was dire -- he feared the response of the Calusa, especially if all should die before returning to their homeland. He realized that the Calusa would believe that Menéndez had killed them (Barcia [1723] 1970:120).

FOURTH ENCOUNTER

Menéndez made arrangements immediately to return to the homeland of the Calusa with Doña Antonia, her Indian maidservant and 30 Spanish soldiers. Within three days, they were at the entrance to Carlos' harbour. Menéndez knew that the Calusa families of the Indians who had died in Havana would be angry and believe that he murdered them. Therefore, he planned instead of staying at Calos to return to Havana immediately (Barcia [1723] 1970:122).

Menéndez spoke to Carlos who came out to greet his sister at the Spanish ship. Menéndez, having agreed to his marriage to Doña Antonia, asked Carlos if he now wished to become Christian, would cut his hair, and travel to Havana to be instructed by the Spanish in Christianity. He also asked Carlos if he would like to have Christians brought to Calos to teach them Christianity (Barcia [1723] 1970:122).

Carlos spoke with Don Felipe, his captain, and finally responded to Menéndez:

...with the reply that for the next nine months he could not become a Christian nor go to a Christian land; if he did, his subjects would rise in revolt and kill him. But after that interval of time, the Adelantado might return and his wishes would be fulfilled (Barcia [1723] 1970:122).

Carlos and Felipe may have hoped that Doña Antonia's marriage to Menéndez would result in a child in nine months. In the way that marriages bind people, the Calusa would then be related through blood to the powerful Spanish.

The following day, Carlos was to turn over additional shipwrecked Christians, but instead, he sent six Calusa men who dined with Menéndez. Perhaps fuming over Carlos' reluctance and delaying tactics regarding the conversion of the Calusa to Christianity and in light of his marriage to Doña Antonia to facilitate the conversion of the Calusa, Menéndez called Carlos a liar and accused him of plotting against the Spanish (Reilly 1981:413-4). Menéndez offered an ultimatum:

... if Carlos did not bring the castaways to him immediately he would have his soldiers decapitate Carlos and all his subjects, burn their villages, and 'become a friend and brother to Carlos' enemies' (Reilly 1981:414).

Carlos responded quickly, sending the Christians to Menéndez and attempting to patch the rift in this uneasy alliance. Carlos sent his cousin and heir apparent, Don Pedro, with Menéndez to Havana. Menéndez left Calusa territory no further advanced in establishing Christianity or peace with the Calusa (Reilly 1981:414; Barcia 1970:122).

Menéndez sent Francisco de Reinoso and thirty other soldiers to establish a garrison in the Calusa "Heartland." Don Pedro, Carlos' cousin and heir apparent, was also aboard. Of Don

Pedro, Menéndez:

... felt he was a person of good understanding and had shown himself to be a good Christian. Menéndez did not want him to come to harm, because he intended to marry him to Doña Antonia; and once they had inherited the state of Carlos, he hoped they could succeed in Christianizing the Indians. (Carlos was master of much of the seacoast along the Florida Keys and the Bahama Channel, where the ships of the Indies fleets were imperiled. For this reason the Adelantado wanted to settle the coast.) (Barcia [1723] 1970:131-2).

At Carlos' village, Reinoso was instructed to build a blockhouse, erect a cross and worship the cross as an example for the Calusa. In addition, he was to investigate a river two leagues away to determine where or not it reached inland to the St. Johns River. Menéndez also instructed Reinoso to send Doña Antonia to Havana as security for the Spaniards (Barcia [1723] 1970:132).

Francisco de Reinoso was welcomed by Carlos who promised not to harm the Spaniards. Reinoso used care in selecting the location of the blockhouse and he and the other soldiers devotedly worshipped at a large cross placed in front of it. Some of the Calusa mimicked their Christian devotions (Barcia [1723] 1970:133-4).

Reinoso sent Doña Antonia and six Indian chiefs to Havana pursuant to Menéndez's instructions. The Spaniards hoped that Carlos' sister would serve as insurance that the Spanish living amongst the Calusa would not be harmed (Barcia [1723] 1970:134).

But Carlos was soon anxious for the return of Doña Antonia. What followed was a battle of nerves for the Spanish soldiers at Calos. Carlos implored Reinoso for the return of Doña Antonia and Reinoso responded by telling Carlos that Menéndez's return was imminent.

But Reinoso was aware that:

...the cacique's insistence was only a sign of the projected annihilation of the Spaniards, once she was in his hands. On three occasions, the cacique had very stealthily tried to kill them and would have succeeded if some Indian women who served in the household and were very devoted to the Spaniards had not warned them. Thenceforward, the Spanish were constantly on the alert, while the cacique became distraught lest his treachery be discovered (Barcia [1723] 1970:134).

Reinoso wrote to Menéndez of the tense situation at Calos (Barcia [1723] 1970:134).

Meanwhile, the situation in Havana was not much better than that found in Calos. A rebellious Spanish captain was causing a disturbance which was leading to mutinous actions (Barcia [1723] 1970:136). These problems were continuing throughout the Spanish colonies in the Americas where instability was rampant. Menéndez found himself in the middle of mutinous Cubans while trying to sort out the recovery of his own mutinous soldiers from Florida.

Concurrently, Carlos was informed that the Tequesta of the southeast Florida coast were harbouring Christians (Spanish mutineers from Ft. San Mateo). The Tequesta were sometime vassals to the Calusa. Carlos asked that the Christians be turned over to him and the Tequesta refused, resulting in a vengeful attack by the Calusa who planned to kill the Christians held by the Tequesta. Instead, two Calusa Indians were killed in their attack on the Tequesta and the Christians were successfully protected by the Tequesta (Barcia [1723] 1970:134). Shortly thereafter, the Christians living amongst the Tequesta were subsequently picked up by a Spanish ship whose crew was told, "...that the cacique and Indians, relatives of Doña Antonia, had treated them very well . . ." (Barcia [1723] 1970:135).

The Tequesta chief lost no time in establishing his own alliance with the Spanish. On the Spanish ship, he:

...sent his brother as ambassador with three men and three women so that he might ask the Adelantado to come and see him, for he was resolved to adopt him as his elder brother and comply with his orders, while all his Indians wished to become Christians (Barcia [1723] 1970:135).

Trying to enlist the Spaniards in Calusa military campaigns, Carlos also began pressuring Reinoso to help the Calusa fight their enemy, the Tocobaga to the north. Reinoso insisted that he could not do so and that if he did, he would lose his head. But Reinoso and the Spaniards at Calos remained alert to the potential hostilities of the Calusa (Barcia [1723] 1970:134).

Meanwhile, Menéndez made plans to return to Calos while simultaneously arranging for a ship to travel to the east coast of Florida to travel up the St. Johns River. Menéndez instructed the ship's captain to await him as he searched for access from the west coast that would allow him to reach the furthest reaches of the St. Johns. If a water route could be found, it would provide the Spanish with a way to avoid the dangerous Bahama channel (Barcia [1723] 1970:135).

FIFTH ENCOUNTER

On March 1, 1567, Menéndez set out for Calos, sailing with seven ships (Barcia [1723] 1970:135). Barcia notes that Menéndez:

...always sailed in such strength that should he come across any French or English pirates, he would be able to destroy them without any risk to himself (Barcia [1723] 1970:135).

But perhaps more importantly, the unrest reported by Reinoso may have been the basis for Menéndez travelling with 150 soldiers and sailors (Barcia [1723] 1970:135). He also transported Doña Antonia, the Calusa Indians who had travelled with her, Father Rogel and Brother Francisco de Villareal -- both members of the Society of Jesus (Barcia [1723] 1970:135). Upon arriving, Menéndez began shoring up the Spanish position in Calos -- he ordered that a house be built for Doña Antonia and a chapel be built for Father Rogel to use (Barcia [1723] 1970:136).

Returning Doña Antonia to Calos, Menéndez sought means to maintain peace with Carlos and the Calusa. When he asked Carlos about a way to cross the peninsula and reach the St. Johns River, Carlos stated that there was no route within his land, but that one existed 50 leagues to the north in Tocobaga territory -- enemy of the Calusa (Barcia [1723] 1970:136-7). Menéndez prepared to travel to Tocobaga territory in pursuit of the river noted by Carlos as well as peace.

Before departing for Tocobaga, Menéndez negotiated a peace between the Calusa and the Tequesta, some of whom had accompanied him to Calos, including the Tequesta cacique's brother. A peace treaty was successfully accomplished (Barcia [1723] 1970:137). The Tequesta could now consider themselves free of their vassalage to the Calusa.

Menéndez told Carlos that the King of Spain wanted him to go in peace among the Indian nations and to negotiate peace among them. Because of this, the Spanish were dedicated to friendly relations with the Tocobaga, even though they were enemies of the Calusa. This is not what Carlos had hoped to hear. But he told Menéndez that he wanted to travel with

Menéndez when he went to Tocobaga, taking 20 chief Indians in order to reach peace more quickly (Barcia [1723] 1970:137).

Arriving in Tocobaga at night, Menéndez was guided to the village of Tocobaga where before dawn they anchored nearby.

Cacique Carlos, forgetful that he came to make peace, spoke very ill against the Tocobagas, and advised the Adelantado to land, burn the village, and kill them. The Adelantado forbore, saying that neither Tocobaga nor his Indians had done him any injury; that he would kill them if they had, but if he acted barbarously, he would be beheaded by the King (Barcia [1723] 1970:137).

Carlos begged Menéndez to allow him and the 20 Calusa Indians accompanying him to burn the cacique's house which Menéndez opposed. He reminded Carlos that one of Carlos' sisters was being held captive by the Tocobaga and that successful negotiations would lead to her release (Barcia [1723] 1970:137).

The Tocobaga cacique was awakened by one of the Spaniards with Menéndez who had been held captive by the Calusa and knew the Tocobaga language. From a small boat rowed close to the cacique's house, he shouted to the cacique that they were Christians and friends and not to fear. The Tocobaga villagers fled, leaving only the cacique, six Indians and one woman (Barcia [1723] 1970:137).

The Tocobaga cacique sent to Menéndez one shipwrecked Spaniard he had been holding captive and using as a slave for approximately six years (Barcia [1723] 1970:137). This Spaniard told Menéndez that:

The Indians had killed all his companions in less than an hour. He had

hidden in the woods where they did not find him, and there he remained over a month, eating palmettoes, acorns, and a little shellfish, until some Indian fishermen caught him and handed him over to Tocobaga (Barcia [1723] 1970:137).

From the Tocobaga cacique, the former captive related the message of appreciation to Menéndez for not killing him, his people, or burning his village. The cacique had remained in the village "...in the temple to watch over his gods, and would rather die than abandon them" (Barcia [1723] 1970:137). He now awaited Menéndez in his village where he was prepared to face life or death as Menéndez wished (Barcia [1723] 1970:137).

Menéndez sent word to the Tocobaga cacique that he came in peace and would visit the cacique in his village. He did not, however, tell the Tocobaga cacique that he brought with him Carlos (Barcia [1723] 1970:138).

The Tocobaga cacique treated Menéndez with respect when he arrived at the cacique's house. The Tocobaga cacique stated that:

...he would not have believed that Christians were so good: for although it would have been easy to annihilate him and all his people, and burn his village and idols, they had favored instead of harmed them. This fact had surprised him, because some time ago he had learned there were Christians abroad in the land who demanded maize and other produce from the caciques of his acquaintance who were killed if they did not comply. He had also learned that certain other Christians had appeared later, whom the caciques said were very fine, and that these beheaded the first Christians. The cacique asked the Adelantado which of the Christians they were (Barcia [1723] 1970:138).

Menéndez told the cacique that they were the last Christians to arrive. He explained that the earlier Christians (the French) were false; Menéndez and his people were true Christians. Menéndez reassured the cacique that their intentions were only to introduce Christianity to

the Florida Indians and not to take their food or to enslave them (Barcia [1723] 1970:138). In introducing Christianity, the Spanish promised peace and generosity -- “. . . no Indian would be harmed unless first he hurt some Christian without cause” (Barcia [1723] 1970:138).

In response, the Tocobaga cacique and the six Indians with him “. . . arose and kissed the Adelantado’s hand with conspicuous humility. When the ceremony was concluded, in accordance with their custom, they again were seated” (Barcia [1723] 1970:138). The Tocobaga cacique, “. . . asked that the soldiers be ordered not to blaspheme the temple of his gods, whom he held in great reverence” (Barcia [1723] 1970:138).

Menéndez then began to pursue the issue of peace between the Calusa and the Tocobaga. Menéndez stated that he was a friend of Carlos and sought negotiations for peace between them, including the release of 12 captive Calusa held by the Tocobaga (Barcia [1723] 1970:138). The following day, the Tocobaga cacique met with Menéndez and Carlos, arguing with Carlos before finally reaching an agreement. At that point, Carlos wished to go ashore with the Tocobaga cacique, but Menéndez feared that the caciques would plot to kill the Spaniards. Therefore, Menéndez sent interpreters along with the caciques who went ashore (Barcia [1723] 1970:138).

Menéndez expressed his interest in the Tocobaga becoming Christians. If they did become Christians, Menéndez stated that, “. . .he would then leave Christians to defend them against their enemies and teach them Christianity” (Barcia [1723] 1970:138).

The cacique stated that regarding Christianity, he could do nothing without discussion with his principal men and subordinate caciques which required three or four days to be brought together. After three days, 1500 Indians had gathered at the Tocobaga village (Barcia [1723] 1970:138).

All of them cut very fine figures with their plumes, bows, and arrows. Suspicious of such a multitude, however, the Adelantado convinced Tocobaga of the fact that his own soldiers were very sanguine in the notion that his warriors wanted to fight them. They could be quieted only by removing the Indians from sight so the warriors must be ordered away, except for the leaders who would negotiate peace. The cacique immediately commanded the Indians to leave (Barcia [1723] 1970:139).

On the fourth day of Menéndez's visit to Tocobaga, Menéndez, Carlos, and the Tocobaga cacique with 29 caciques and 100 headmen met in a large house in Tocobaga. The Tocobaga cacique stated that if what Menéndez said was true, that:

...they all wished to adopt him as elder brother, become Christians, and friends of Carlos, and give up the captives -- but on the condition that if war broke out the Adelantado would aid whoever was attacked, and that he leave another captain with thirty Christians to teach them religion (Barcia [1723] 1970:139).

Menéndez left thirty soldiers at Tocobaga, including a reluctant Captain García Martínez de Cos (Barcia [1723] 1970:139).

Menéndez asked the Tocobaga cacique about waterway access to the interior where the St. Johns River begins. The cacique told him that there was a river reaching into the interior, but that there were many Indians living there who were dangerous. He warned Menéndez not to go there with so few soldiers as were travelling with Menéndez at that time (Barcia [1723] 1970:139). Despite the fact that Menéndez had directed a Spanish ship to negotiate the St. Johns River while he attempted to locate a river on Florida's west coast that would

offer access to the headwaters of the St. Johns, his efforts were thwarted.

Menéndez left Tocobaga to return Carlos to Calos. During the trip, an alarming incident occurred.

On seeing peace actually established, the cacique became angry and disappointed. The Adelantado attempted to cheer him, but in vain. Late it chanced that one of the most important seamen, while mending some lines, accidentally let a light rope drop on the cacique's head. Carlos thought it had been done on purpose. He attacked the seaman like a wild beast, and after giving him a great blow, grappled with him in order to hurl him into the sea. The Adelantado separated them. The seaman was highly incensed and the Adelantado no less so (Barcia [1723] 1970:139).

Interpreters claimed that Carlos had, "...threatened to leave no Spaniard alive once he was free" (Barcia [1723] 1970:139). The Spanish crew was outraged, wishing and expecting Menéndez to hang Carlos. But Menéndez recognized the importance of delivering Carlos to his homeland unharmed (Barcia [1723] 1970:139). Emotions against Carlos continued to run high with the Spaniards.

Once back in Calos, Menéndez provided more substantial fortification for the Spaniards living amongst the Calusa. He strengthened the Spaniards' house, provided long, heavy cannons known as "culverins," and left forty soldiers at Calos. During this time, the Spanish temporarily moved their belongings to another island across a deep channel. Despite their move, Carlos:

...soon began to arrange to kill us and to dance with our heads, and then to seek refuge with all his people by living on some ponds (*lagunas*) to which the Spanish would not be able to go (Rogel [1568] in Hann 1991:265).

The garrison and soldiers were to protect Father Rogel who was to teach the Calusa about

Christianity as well as serve the Spaniards living there (Barcia [1723] 1970:139).

Doña Antonia remained in Calos. Menéndez, though:

. . . was very annoyed with her because she was quite partisan to her brother and had scolded the Adelantado for having refused to act against Tocobaga as her brother had requested. She told the Adelantado he had two hearts, one for himself, and one for Tocobaga, but none at all for her and her brother... (Barcia [1723] 1970:139).

Tensions between the Spanish and the Calusa were high.

Hann states that, “Rogel learned that Carlos had instructed certain of his servants to kidnap the priest if they found him outside of the fort” (Hann 1991:221). Essentially, Rogel was a prisoner in the Spanish fort. His efforts to teach Christianity were limited to only a few Indians who came to the fort for handouts of maize (Hann 1991:222). Soon thereafter, Rogel travelled back to Havana. Then, according to Rogel:

...Carlos withdrew his women and treasures from there and carried them to another village. And it was, as we learned later, so that he would be more unencumbered and prepared to achieve this feat [harm to the Christians] (Rogel [1568] in Hann 1991:266).

Carlos' continuous threats quickly earned him Spanish retaliation. Within three days of Rogel's departure to Havana, Captain Reinoso killed Carlos after learning of his latest plans to massacre the Spanish which cleverly involved holding a gathering of Indian villages to bring gold and silver to trade with the Spaniards. Other Indians would then arrive and through surprise attack, kill the Spaniards. The great captain, Don Felipe, was installed by the Spanish as the new cacique to replace Carlos.

Don Felipe claimed legitimacy to the position, but found himself forced to rely on Spanish support (Hann 1991:222-3). Even so:

. . . Felipe showed no more inclination to accept the Spaniards' religion than had Carlos, beyond making promises that he would become a Christian when Menéndez de Avilés returned from Spain . . . [N]either Felipe nor others among the ruling elite were willing to abandon their polygamous practices to become Christians. Felipe told Rogel frankly that the priest might try to train the children in the new ways but that he could not expect adults to adopt them (Hann 1991:223).

The Calusa resisted Christianity in light of their cacique's reluctance and Don Felipe pointed to the expectations of the Calusa people that traditional practises continue -- especially in legitimizing Don Felipe's new position as cacique. By 1571, the first mission to the Calusa was abandoned by the Spanish who had no success with the conversion of natives to Catholicism. At that time, Fort San Antonio had thirty-six houses (López de Velasco [1575] in Hann 1991:309).

After investing all of his financial resources in La Florida, Menéndez must have been exasperated when it yielded little in the way of material possessions. Apart from a limited amount of precious metals, the Spanish were prevented from exploring the interior of South Florida for a water passage across the peninsula.

In 1573 after seven years of contact with the Calusa, Menéndez wrote a report to the Council of Indies to support his petition that the Spanish Crown enslave the South Florida Indians. The constant efforts of the Indians to kill Spaniards whenever possible appears to comprise the bulk of his report. Menéndez states that:

...they have been accustomed since the Indies have been discovered to kill all the people from the ships which are, the most of them, lost in this district;

and although concerning this I have told the caciques of the land they should not do it, and that if they slew them I would make war upon them, killing them and making slaves of those I captured alive -- and they promised me not to do it -- they do not keep their word, nor have they wished to comply. I have made peace with them three times, and three times they have broken it, and when they saw they could kill Christians safely, they did it... (Menéndez [1573] in Connor 1925:33).

Menéndez himself narrowly escaped the hostility of the South Florida Indians when shipwrecked once on the east coast. While following the coast northward to St. Augustine on foot, the shipwrecked passengers were threatened by the Indians who were prepared to attack the Spanish. Three times Menéndez successfully headed them off by telling them that they were followed by a large army of Spanish who would kill all the Indians they found and that they should seek safety inland.

Menéndez's report concludes by stating that:

It is needful that this should be remedied by permitting that war be made upon them with all rigor, a war of fire and blood, and that those taken alive shall be sold as slaves, removing them from the country and taking them to the neighboring islands, Cuba, Santo Domingo, Puerto Rico. So that in this manner, besides the service rendered to God our Lord and to your Majesty, this district where war must be made on such people because it is the most full of danger and where many ships are lost coming from the Indies to these kingdoms, will remain clear and unobstructed... (Menéndez [1573] in Connor 1925:35).

Menéndez's petition to enslave the Calusa and remove them to the West Indies was rejected by the Council of the Indies in a response dated 1574. While his petition was probably little different than those used to enslave the Carib people of the Caribbean, religious involvement in the New World led to new policies which prohibited the enslavement of New World natives under any pretext.

PART III: SECOND SPANISH MISSION ATTEMPT -- 1697

Events preceding the second Calusa mission illustrate the tensions existing between religious leaders and administrators. The continuing depopulation of North Florida native cultures enhanced those tensions -- native labour was critical to the survival of Spanish colonists in North Florida. During the 17th century, tensions between Spanish missionaries and administration were high:

Conflict between representatives of church and state in seventeenth-century Florida and New Mexico was apparently the norm -- interrupted only occasionally by harmonious relations between particularly accommodating personalities. Friction over jurisdiction and privilege often seemed to be the source of the discord, but the deeper issue of who would exploit Indian land and labor stood at the core of the Spaniards' debilitating intramural contention (Weber 1992:132-3).

Religious leaders in Florida wrote a letter to the king of Spain complaining that Spanish administrators through their interest in the "amber" trade (See Appendix B: Amber Trade) had thwarted missionization efforts to the South Florida Indians (Hann 1991:12). Their repeated comments emphasize the weight the Franciscans placed on this amber trade:

. . . in the latter [coast of Carlos] because of the greed for the amber that is found on this coast, as it appeared to the governors that their interests would suffer by this path [being followed], setting more value on the corruptible and the vain than on the incomparable treasure of so many souls as have been lost and will be lost with these [steps] (Pareja, Martínez, Rruiz, Desquera, de la Cruz, Moreno de Jesus, and Romero [1617] in Hann 1991:13).

And as far as entradas visiting the Calusa, the Franciscans state that, "Only to the Province of Carlos have they not gone, even passingly, because no one is permitted even to dream of entering there because of the amber" (Pareja, Martínez, Rruiz, Desquera, de la Cruz, Moreno de Jesus, and Romero [1617] in Hann 1991:14).

The Franciscans also complained vociferously about the behaviour of the Spanish soldiers and administrators. They state that due to the influence of the Spaniards, the Indians learned to have no respect for the Franciscans (Pareja, Martínez, Ruiz, Desquera, de la Cruz, Moreno de Jesus, and Romero [1617] in Hann 1991:13-18).

In addition, foreign threats became more real for the Spanish in Florida. The establishment of Charleston in 1670 by the English was a threat to the Spanish. In the 1680s, France began to explore regions along the Mississippi River and the Gulf Coast of Texas in order to establish French presence close to valuable Spanish resources in New Spain (Weber 1992:141, 148).

From the early 17th century, the Franciscans began to push for missions in South Florida. The great losses of North Florida native lives to the European diseases introduced by the Spaniards threatened to shut down Spanish settlements that relied on the labour of the natives for survival. By the early 1680s, their efforts finally neared fruition. Without Spanish control in South Florida, the safety of Spanish lives and Spanish cargo along the south Florida coast could not be confidently assured (Hann 1991:49-71).

Plans for a second mission to the Calusa were further prompted by an old Calusa cacique who requested that Spanish missionaries be brought to the Calusa. In 1688, the son of a Calusa cacique known as “Carlos” along with many of Carlos’ leading men met with Florida’s governor to offer “...obedience to the crown and to inform the Spanish authorities that he and his people were ready to accept the Catholic faith” (Quiroga y Losada [1688] in Hann 1991:80).

In his letter to the King of Spain, Losada recounts:

And Sire, not solely all the Christian chiefs offered to give due obedience and vassalage to Your Majesty, but also many remote heathens and in particular the son of the Great Cacique of the Keys of Carlos who had never before come [to render] obedience. And his father sent many of his leading Indians with him, which was of great consequence because of the pleasure with which they came to give it and to offer their submission to our holy Catholic faith and other heathens of Vasisa from the sea coast and to live as Christians with villages (*pueblos*) and religious. And in order to secure this, I helped them with some trade goods and iron tools so that they might build their places ([1688] in Hann 1991:80-1).

The bishop of Cuba sent a message to the Calusa chief via a Havana fisherman who was going to the Bay of Carlos. The message was of the interest of the Crown in establishing a mission to the Calusa and also an invitation for the cacique to travel to Havana to be entertained and to discuss the matter.

In late 1689 the Calusa chief travelled to Havana to visit the bishop of Cuba. The Calusa chief offered himself and leading men accompanying him for baptism in addition to conversion of all his vassals (Hann 1991:38). After staying in Havana for a month, the Calusa chief returned home with foodstuffs and gifts from the Spanish who sought to make his stay as pleasant and inviting as they could (Ebelino de Compostela [1690] in Hann 1991:88-90).

Machinations beginning in the early 1680s continued until finally in 1695, Fray Father Feliciano López in securing the transport of 14 Franciscans who had been authorized the year prior suggested that four to six of those Franciscans to be transported be assigned to the Province of Carlos (López [1695] in Hann 1991:117-8). In November of 1695, the Council of the Indies approved the sending of six religious to the Calusa (Council of the

Indies [1695] in Hann 1991:121).

In the later part of 1696, a revolt of Indians at the Mayaca-Jororo Missions resulted in the death of a missionary and two Indian assistants (Laureano de Torres y Ayala [1697] in Hann 1991:143). In his letter to the King of Spain, Laureano de Torres y Ayala explains that Spanish soldiers had been sent out to search for the perpetrators who had disappeared into the wilderness. At the same time, the Spanish sought to re-establish the villages since all the natives in that area and under Spanish jurisdiction had fled (Laureano de Torres y Ayala [1697] in Hann 1991:143-155).

It would be September 18, 1697 before the Spanish missionaries requested by the Calusa cacique would arrive in Calusa territory. Named after Florida's governor, the second mission in the Bay of Carlos was called San Diego de Compostela (López [1697] in Hann 1991:158). Despite the optimistic efforts of the Spanish missionaries, the Calusa had no use for Christianity unless Christianity promised an endless stream of material goods.

The feigned acceptance of Christianity by the Calusa during the time when the missionaries were first housed in the cacique's home fell by the wayside as soon as the missionaries moved into the new house they had built on October 3, 1697. López states that while they remained at the cacique's house:

..they had gone along disposing their spirits little by little for the acceptance of the faith, making speeches to them and explaining its mysteries to them and the need to believe in them and to acknowledge them in order to be able to be saved and seeking to convince them of the falsity of the [beliefs] by which they were living. And that the cacique and the rest of the Indians were present at all this with reasonable signs [of interest] until the said third day of October, when, on seeing the provisions that they brought carried from the

house of the cacique to that of the religious... ([1698] in Hann 1991:165-6).

López states that the Calusa:

...began to change, saying: why were they not dividing all of it among them and not giving them clothing, because if they were not going to give them clothes and to eat, what use was it [for them] to become Christians? ([1698] in Hann 1991:166).

The young Calusa cacique brought two children to Reverend Fray Father López for baptism.

Once the children were baptized by López:

...the said cacique asked where the clothes were that they were supposed to give him. And that after this witness having given him two little pieces of cloth and other trifles, the said cacique stated that that was not right; that he should give him the clothing that the king had ordered him to, because if he was not going to give clothing and food, it was not good to become Christian and no one would want to become one (López [1698] in Hann 1991:166).

López's next remarks tell us of the Calusa reaction to the dearth of presents from the

Spanish:

And that from that day on they began to subject the religious to some harassment, mistreating them by words and deeds and stealing from them repeatedly ([1698] in Hann 1991:166-7).

Some question whether the Calusa ever sought Christian missionaries in the 17th century

(Hann 1991). But after the Calusa became openly hostile towards the Spanish missionaries,

Fray Carrillo states that when questioning the Calusa about their requests for missionaries,

their response was:

...that the old chief had made this request, but that he was no longer in charge, and that just as the Christians could not cease to be Christians and live without the rosary, neither could they abandon their law and become Christians... ([1698] in Hann 1991:174-5).

Role of the elder cacique

Upon arriving at the Calusa capital and after being greeted by the young cacique, Fray López found the young cacique's father, the old cacique, apparently near death. The old chief told López:

...that he was dying with great unhappiness because priests were not coming, but now that he saw them in his place, he would die consoled (López [1697] in Hann 1991:158).

The elder cacique played a critical role in the survival of the Spanish missionaries. In his testimony, Juan Esteva, the youthful Spanish assistant, states that when the house was surrounded by armed Calusa, the *old cacique* protected the Spanish by complaining to the young cacique who then ordered the Calusa to withdraw ([1698] in Hann 1991:195).

Additionally, in the testimony of Fray Francisco Antonio de Jesus and Fray Francisco de San Diego regarding the failure of the 1697 mission attempt, they state:

That they heard and learned from the Indians that their not being killed was at the insistence of the old chief who said that if they killed them, little squadrons would come from Havana and from Apalachee to kill them and that they learned this and heard this on repeated occasions. . . ([1698] in Hann 1991:178-9).

The role of the elder cacique appears to have served as a protective one for the missionaries. His influence appears to have prevented their demise at the hands of the young cacique. It seems that the old cacique's actions were a product of wisdom rather than of kindness. Knowing the Spanish penchant for reprisals, he had no interest in attracting their attention.

Role of the elder cacique's brother

The brother of the old chief escorted the missionaries out of Calusa territory, stating to

Father Fray Fernando de Samos:

‘Did I not tell you, Father, that this cacique was so evil a man? Go quickly, because if you do not, they are going to kill you’ ([1698] in Hann 1991:172).

The elder cacique’s brother appears to support the old cacique’s protective role towards the missionaries. The Calusa concern for the well-being of the Spanish was indicative of the knowledge that should any Spaniards be killed, reprisals would most certainly follow.

Role of great captain

Francisco de Jesus and Francisco de San Diego in testimony recalled that three times their house was surrounded by Calusa armed with darts and arrows who had the intention of killing them. Each time, they state, the great captain who was also the brother of the cacique, prevented any harm coming to the Spanish.

On another occasion, López was meeting with the old cacique and:

...as he was leaving an Indian raised a hatchet in order to kill the said father commissary and the said captain prevented it, giving some blows to the Indian. And that on learning of this the cacique, his brother, hit the said captain with a cudgel and with his hand because he had prevented them from killing the said father commissary this time and for having blocked everyone from doing it in the other cases alluded to (López [1698] in Hann 1991:178).

The protection of the Spanish missionaries by the great captain may reflect an adversarial, relationship between the cacique and the great captain. The Calusa abused and humiliated the Spanish missionaries to a great degree and continued to reject Christianity, soon expelling the Spaniards altogether. Robbed of all they owned and left with only their undershirts, they were taken to the Keys and abandoned.

The Calusa must have believed that they would be able to manipulate the Spanish

missionaries in order to meet the Calusa interest in European material goods. As soon as the Calusa perceived that the missionaries were unwilling to hand over all the items they brought, the Calusa became hostile. The determination of the missionaries in destroying the Calusa religious beliefs further angered their Calusa hosts. The abandoned missionaries were nearly starved when they were discovered by a Spanish captain who was *en route* to the Bay of Carlos to deliver messages to the missionaries and provide assistance (Hann 1991:161).

The beginning of the 18th century brought drastic changes to the cultural landscape of Florida. In 1705, Moore's intrusions into North Florida in alliance with Guale Indians succeeded in destroying several Apalachee missions. Guale Indians comprised to majority of the military force and they captured native Floridians for sale into slavery in Charleston. The Guale Indians were to face a similar fate from their English ally after the depopulation of natives from Florida. Georgia coastal missions were forced to retreat to the stone fort at St. Augustine where satellite native communities were established. English colonial impacts left North Florida largely vacant.

These events in the early 18th century set the stage for the invasion of Lower Creeks which followed. Pushed out of their homelands by European colonists, the Lower Creek began seeking refuge in northern Florida, soon thereafter entering southern Florida and into conflict with remnant Calusa. Eventually, Indians living in the Keys at the southernmost tip of Florida were also attacked.

Spanish inroads into Southwest Florida had also been felt. Cuban fishing banks had been

heavily taxed by Spanish efforts to feed labourers in the Caribbean, including Caribs and Africans. Spanish fishermen from Cuba established themselves in *rancheros* along the Southwest Florida coast by the early 18th century. These were located on several barrier islands located within the Calusa heartland (Edic 1996:35-7). At these fisheries, the Spanish Cubans employed local Indians who have since been known as “Spanish Indians” (Edic 1996:37).

Spanish Cubans traded with the Florida Indians by the early 18th century, although firearms, knives, other weapons or metal objects were legally prohibited (Dickinson 1985 in Edic 1996:35). Shark liver oil, ambergris, tree bark, fruits, hides, furs, live birds, and other items were reportedly traded to the Spanish Cubans. Tobacco, rum, coffee, sugar, arms, and ammunition in addition to fabric, metal tools, lead sinkers, fish hooks, nets and boats were soon part of the trading relationship between South Florida Indians and the Spanish (Edic 1996:35).

Final Mission Effort

The 1743 mission effort by the Jesuits was the last to serve South Florida Indians and was located at the mouth of the Miami River where 180 Indians lived in five structures and included remnants of Calusa, Keys, and Tequesta Indians (Alaña [1760] in Hann 1991:420). Despite repeated requests for Christian missionaries, this multi-cultural society effectively repulsed the Spanish after demanding from the missionaries the provisions intended for the Indians.

Spain loses Florida to England

The policies and methods of the Spanish approach to the New World and La Florida played a large role in creating significant differences between the treatment of native populations living under Spanish influence and those living under English influence farther to the north (Fitzhugh 1985:271-2). Whilst the English colonies developed within a atmosphere of mercantile enterprise, the Spanish were moved by religious and administrative motives and, "Their goals were to reap maximum economic, military, and spiritual benefit from a minimal investment of personnel and resources" (Fitzhugh 1985:272). Ultimately:

Spain simply could not deliver the goods, either to its own subjects or to Indians, and its North American holdings stagnated. Unlike more populous areas of the Spanish empire, which enjoyed fabulous mineral wealth and responded to shortages by gearing up local production, frontier communities were too small, impoverished, and beleaguered to rally. Caught in a vicious circle, the frontier communities remained small because they had little to attract immigrants and much to repel them. The shortage of merchandise for the Indian trade also hindered Spain's ability to expand its frontiers. Across the borderlands, from Florida to New Mexico, wherever English or French competition increased in the first two-thirds of the eighteenth century, Spain lost control of the Indian trade -- the key to empire in North America. The expanding Spanish frontier sputtered and stalled, and in some areas rolled back (Weber 1992:174).

In January of 1762, England declared war on Spain, anticipating the Spanish agreement with France in the Family Compact of 1761, "... which bound Spain to declare war by May 1762 if peace had not been made between France and England" (Parry 1990:302). Havana was taken by the English in 1762 and this hastened the end of the war. Spain traded Florida to the English in exchange for the return of Havana to Spain. Reluctantly, France turned Louisiana over to Spain to buy Spanish acquiescence in a speedy settlement of terms (Parry 1990:302-3). At this point in time, Spain vowed to relocate all Spanish colonists and Christian Indians to Cuba to leave Florida desolate.

Conclusions:

Various aspects of Spanish history affected their approach to the New World. The *Reconquista* established a tradition of militarism, conquest, and religious conversion. This carried well past the end of the Reconquest and into explorations of the New World, including Florida.

The *Patronato* allowed Spain to establish a new religious structure outside of Rome and under Spanish control so that the conversion of New World natives would be timely and efficient. This break from traditional Church policy provided opportunities for innovations, including the creation of the Council of the Indies to address New World administrative issues. Colonisation of the New World was guided by these events, policies, and traditions.

By the time Menéndez arrived in Florida in 1565, revisions to Spanish New World policy had already taken place. Facing a hostile Calusa society on Florida's Southwest coast, Menéndez chose to establish a mission amongst them to convert and Hispanicize the Calusa. If the Calusa became Catholics, the Spanish would be able to move safely in South Florida and along the southern Florida coastline where shipwrecks were frequent. The Calusa believed that an alliance with the Spanish would bring with it military support against Calusa enemies.

Menéndez failed to bring a lasting peace between the Calusa and the Spanish in South Florida. Even Menéndez's effort to enslave the South Florida natives came too late as Spanish policy towards New World natives had shifted. Additional efforts to establish missions in Southwest and South Florida (1697 and 1743) were met with the same disdain

and hostility from the Calusa which soon resulted in their abandonment by the Spanish. The Calusa culture was able to remain primarily intact even though they had been subjected to early and intense contact with the Spanish. Chapter 8. "Isolation of the Calusa and Cultural Continuity" explores the isolating mechanisms which in tandem allowed an atmosphere of cultural continuity for the Calusa for nearly 200 years.

1. By the time St. Augustine was established as a Spanish settlement on the northeast coast of Florida, it had become the focal point for Spanish activity in Florida, including Spanish administrative offices.

South Florida Spanish settlements were always short-lived and never drew more than roughly 30 people to man a garrison and mission. Coincidentally, the Calusa interacted with Spanish administrative officials in Havana, Cuba.

CHAPTER 8. ISOLATION OF THE CALUSA AND CULTURAL CONTINUITY

From a mercantile as well as a military perspective, Menéndez and others determined that the importance of Florida lay in its geographical position in relationship to the West Indies, New Spain, and Tierra Firme. New World cargo travelling from these locations to Spain required protection on Florida shores where shipwrecks were frequent and Spanish presence in Florida was important in combatting the efforts of foreign nations in establishing a foothold in the New World. But efforts to establish a Spanish garrison and mission in Southwest Florida failed miserably. The abandonment of the first Spanish mission at Calos in 1571 began a deep period of isolation for the Calusa that ended in 1697 when a second mission was attempted in Southwest Florida. In the interim, this relative isolation left the Calusa culture buffered from European social and biological impacts.

The nature of the Southwest Florida environment, Calusa hostility, and Spanish policy all played roles in promoting isolation. Investigating this isolation of the Calusa provides insight into the mechanisms behind the strong cultural continuity of the Calusa which lasted far past Contact. Isolation of the Calusa culture from the Spanish was the result of many factors, including: 1) the lack of natural resources precious to the Spanish in Southwest Florida; 2) the hostility of the southwest Florida environment which was difficult and treacherous for the Spanish and home to the Calusa; 3) the strength of the Calusa power structure which included an organized military and boasted superior numbers as well as technology more suited to the environment and guerilla warfare; 4) the official position of the Spanish monarchy which prohibited enslavement of the Calusa by the Spanish; 5) the fragility of the Spanish settlement support system which was fragile, spotty and unreliable,

reflecting a lack of total investment; 6) the open hostility of the Calusa towards the Spanish; 7) the strength of the Calusa power structure which meant that the death of its political leader at Spanish hands did not cause collapse and chaos; and 8) the solidification of Calusa allegiances as a result of the Spanish threat. The most important ramification of the relative isolation of the Calusa from European contact is the probable protection from infectious European diseases (discussed further later in this chapter). Overall, isolation and independence from the Spanish allowed the survival of the Calusa culture into the 18th century. Each factor of isolation played a role in maintaining distance between the Spaniards and the Calusa.

1. Lack of Natural Resources Precious to the Spanish

The most important aspect of the New World to European sailors and soldiers was the seemingly limitless potential to become rich from New World commodities. The success of Cortés in Mexico and Pizarro in Peru stirred the imagination of many Spaniards. But the Southwest Florida coast offered nothing for those seeking wealth and titles.

Within a short period of time, Menéndez's men had traded for all of the gold and silver that the Calusa had salvaged from Spanish shipwrecks on Florida shores. The Spanish learned enough from the natives to know that, unlike the West Indies, Mexico, and Peru, no gold or silver sources were located in that region. The lack of native agricultural crops and swampy soils were further proof of the shortcomings of Southwest Florida

Parry states that:

It should be remembered that by far the greatest part of the Americas at that

time was neither populous nor productive. Immense areas were traversed by Spanish explorers who, as *conquistadores*, were failures, in that they found nothing which they considered to be of value (Parry 1990:97).

The lack of valuable resources in Florida was compounded by the hostility of the environment.

2. Hostility of Southwest Florida Environment

The shallow coastal waters of the southwest Florida coast posed serious transportation problems for the Spanish whilst the swampy interior provided challenges of its own. For the most part, Spanish movement in *La Florida* was best served by water travel. Passage along the southwestern coast was most difficult due to the shallow nature of the Gulf coastal waters, but was also complicated by the vagaries of sand bars, reefs, and other obstacles including areas accessible only by high tide.

Because the large heavy Spanish ships were also subject to high drafts, the smaller ships were used to move inland for any contact with Florida native cultures. This also meant that smaller numbers of Spaniards could make the trip because the smaller ships carried fewer soldiers. Naturally, this put the Spanish at a disadvantage militarily for any encounters with the Calusa on land.

The interior of Southwest Florida is swampy, poorly drained and difficult to access. The Spanish found it difficult to traverse due to the many wetlands. The use of horses was often not possible as the horses bogged down in the marshy soils. The Spanish foot soldiers found their clothes tattered, torn, and their shoes scraped from their feet from the difficult terrain. It was not long before Spanish morale was undermined by any efforts to cross such difficult

interior areas.

Rivers also proved difficult to travel. Dodging natural obstacles, the Spanish also encountered snags built of branches, earth and logs by the Indians to deter their river travel. The native Floridians controlled river travel which provided the most convenient mode of transportation to the interior.

These trials were far greater than any typical Spaniard was prepared to tolerate. In the New World, the Spanish fully expected to live in a comfortable fashion. This meant maintaining a diet typical of the Spanish hidalgo (not the Spanish peasant). The edible foods available within the Southwest Florida environment were not understood by the Spanish who longed for European foods. Therefore, they failed to take advantage of the rich estuarine environment. Instead, the Spanish considered the South Florida environment a poor and difficult one in which to live.

Scarry and Reitz (1990) note that Spanish documents during the 16th century describe both great deprivation and great bounty. Depending upon the author, deprivation appears to have been exaggerated to enlist assistance whilst bounty, also exaggerated, proved the success of the Florida colonies and attempted to lure colonists and additional financial support with promises of plenty (Scarry and Reitz 1990:351-2). The truth must have been somewhere in the middle. Foods utilised by Florida natives were foreign to Spanish taste, but much more readily available than traditional Spanish supplies.

Spaniards felt deprived if they did not have wheat bread, olive oil, and wine (Bushnell 1981:12; Crosby 1970:65). Because these commodities could not be produced locally and supply ships arrived irregularly, there were chronic

shortages of familiar Iberian foodstuffs. The colonists often found themselves eating corn bread and fish rather than wheat bread and mutton (Scarry and Reitz 1990:352).

In contrast, the Calusa were adept at moving and living in their home environment. Canoes provided quick access to both the rich shallow coastal waters as well as much of the swampy interior. During the driest times of the year, they were able to move on foot through portions of the interior. Within their homeland, the Calusa were well adapted to an environment that the Spanish found foreign, intimidating, and barren. The Calusa military strategies were also well adapted to the Southwest Florida environment.

3. Calusa Military Structure

In Southwest Florida, the Spanish met the Calusa cacique who was able to muster thousands of warriors at a moments notice. With as many as 50 vassal villages in historic times, the Calusa cacique controlled not only great numbers of warriors, but also was protected by vassal communities. These vassal villages were able to monitor and deter enemy movements against the Calusa before they reached the Calusa “Heartland.”

The Spanish were vastly outnumbered by Calusa warriors, presenting an obvious obstacle to the Europeans. But successes in the New World by small numbers of Spanish soldiers in Mexico and Peru provided them with confidence in their superiority. Bolstered by greed and a measure of religious fanaticism, the Spanish sallied forth in an effort to conquer the New World natives.

Bu the simplicity of native military technology proved superior in the Southwest Florida

environment. Reed arrows easily pierced and splintered through Spanish chain mail which in the Southwest Florida heat quickly became an unnecessary burden. Not only was the chain mail unable to stop native arrows, but in the event that military actions occurred in a water setting, the chain mail had a tendency to impair and even drown soldiers who had fallen overboard.

The Spanish soldier's military experience, if any, was often based on the European military code which consisted of specific rules for conduct in warfare. Unused to the guerilla warfare practised by the native Florida cultures, the Spanish were at a distinct disadvantage. The Calusa were highly effective militarily. And when certain vassal villages schemed to ally with the Tocobaga, Calusa cacique Felipe killed the village chiefs and paraded their heads atop poles. This type of psychological warfare no doubt resulted in compliance by many vassal villages.

By instituting retribution, the Calusa maintained a cooperative (if reluctant) populace. The large number of Calusa vassals contributed to their powerful military structure, their simple technology was effective, and their familiarity with the Southwest Florida environment dealt them obvious advantages against the Spanish. The Calusa military might was a constant threat to Spanish safety.

4. Hostility of the Calusa

The persistent and vehement hostility of the Calusa and their vassals towards the Spanish repulsed the Spanish at every turn. This pattern was established long before official contact between the Spanish and the Calusa took place.

Juan Ponce de León's 1512 voyage to officially locate and explore *La Florida* resulted in the first recorded contact with the Calusa. This seems to have occurred in the “Heartland” of the Calusa, in the vicinity of Charlotte Harbour on the southwest Florida Gulf Coast. The Calusa met Ponce with hostility. During Ponce’s encounter with the Indians, they “...descended on him in canoes and killed a Spaniard with two arrows” (Barcia [1723] 1970:2). Initially, the Spanish were surprised to discover that Indian technology was effective in hostile actions with the Spanish.

In 1517, a pilot who had travelled with Ponce de Leon in 1512 to Calusa territory returned to the same location in desperate need of water. Whilst soldiers were ashore, the Calusa quickly arrived, “...dressed in skins and armed with bows, arrows, spears, and other weapons resembling swords, descended in force and attacked the Spaniards.... At the same time other Indians in canoes attacked the vessel, and so fiercely that despite a strong resistance by the seamen,” it was nearly captured by the Calusa. Those Indians ashore began assisting those trying to take the Spanish vessel, but were eventually driven off by the Spaniards (Barcia [1723] 1970:3).

In 1521, Ponce de Leon returned to Florida to found a settlement, but unwisely landed in Calusa territory. Here he was mortally wounded by the hostile Calusa and returned to Cuba where he died within a few days (Barcia [1723] 1970:5-6).

At this point in time, the Calusa are reported to have been very powerful. In fact, they controlled all of the southern Florida peninsula. The initial hostility that rebuffed Ponce de León's party may reflect a Calusa calculated response to outsiders. By this time, "Slaving

raids by Antillean colonists undoubtedly also helped to establish a hostile attitude among the Florida Indians" (Deagan 1985:286).

When Menéndez arrived in 1565, a pattern of hostility had already been established. The difficulties encountered by Menéndez (as discussed in Chapter 7) included his continued unsuccessful efforts to negotiate for peace. The Calusa consistently failed to honour these negotiations. Consequently, no Spaniard was safe in South Florida as long as the Calusa dominated the landscape.

5. Execution of Calusa caciques did not cause the collapse of the Calusa culture

Cortés in Mexico and Pizarro in Peru had found large chiefdoms on the verge of collapse. With only a handful of soldiers, each had conquered a native nation. Menéndez and his soldiers may have hoped to subjugate the Calusa in a similar manner.

Because the Calusa caciques were constantly hatching plots to murder the Spaniards, the Spanish executed two Calusa caciques soon after entering Southwest Florida. This did not result in the collapse of the Calusa culture. If the roots of the complex Calusa culture were buried deep in prehistory, the power of this culture resided not in individuals, but in access to control over economics, ideology, military, and social realms by an elite class. At this time of crisis, the Spanish execution of two caciques may have served, in fact, to solidify the Calusa culture in response to an outside threat.

6. Spanish threat may have solidified native allegiances

Similarly, separate native cultures may in some instances chosen to band together against the

Spanish. For example, Menéndez worried that Calusa cacique Carlos and the Tocobaga chief would scheme to murder the Spaniards if they were left to speak alone and so he sent translators to stay with them every minute. Menéndez's concerns were probably not unfounded.

Fontaneda's remarks that the Calusa paraded captive Spanish shipwreck victims to interior villages, telling them that they command the Spanish illustrate how native societies might gain prestige and influence through the use of European captives. The threat posed by the Spanish was an effective mechanism with which to gain allies. Spanish presence was a threat to all native New World cultures and this soon became evident. Refugees fleeing the Spanish probably created multi-cultural communities throughout Florida.

7. Spanish Support System

Spanish soldiers, missionaries, and colonists faced more than just the darts and arrows of the hostile natives. Unfortunately for them, the Spanish administration never fully invested in the enterprise of *La Florida*. Contrasted with New Spain and Tierra Firme, the lack of precious metals or other commodities in Florida meant that it would never financially support itself. Because of the poverty of commodities of interest to the Spanish, there was a reluctance to continue investing in a losing proposition.

Spaniards in Florida were left to fend for themselves in many instances. Supply ships could not be relied upon. Prices for the types of supplies required by the colonists were astronomical to the point that the governor of Florida decided to conduct transactions for foodstuffs in Spain whenever possible to avoid the high costs propagated in the Caribbean.

Native resistance among various native Florida groups meant that the colonists were constantly exposed to life-threatening situations. Living within or near Spanish forts provided some protection, but the constant harassment took its toll on the colonial populations. Only the missionaries kept the Spanish presence in *La Florida* alive.

8. Official Spanish Policy

Even during the earliest officially sanctioned explorations of Florida, the Crown had already prohibited the enslavement of New World natives as a result of their experiences in New Spain, the West Indies, and Tierra Firme (Barcia [1723] 1970:6). And the failure of peace negotiations initiated by Menéndez resulted in a constant state of hostility between the Spanish and the Calusa. After seven years, Menéndez was frustrated in his attempts to control Southwest Florida which remained solidly under native control.

Finally, Menéndez sent a petition to the King of Spain in 1573 pursuing the enslavement of the South Florida natives. In his petition, Menéndez outlined a series of events which illustrated the bombastic and bellicose behaviour of the South Florida Indians. As a result of Menéndez's petition, a policy was set forth by the Crown specifically prohibiting the enslavement of South Florida Indians.

Menéndez's petition to the king of Spain had brought an end to any official Spanish efforts to develop a relationship with the Calusa. Unable to gain anything by maintaining a presence in Southwest Florida, the Spanish abandoned the southern portion of peninsular Florida. After less than a decade in South Florida, the Spanish moved their efforts to North Florida.

Conclusions:

The isolation of the Calusa from Europeans after initial Contact appears to have played a large role in the survival of the Calusa for nearly two hundred years, although eventually, they lost the battle with diseases to which they had no immunities and were displaced from their homeland by Native Americans encroaching from southern Georgia and Alabama.

In the New World, isolation served to protect some native cultures from aggression. Caribs living on Dominica faced annihilation at the hands of Europeans. Isolation also offered them a chance for survival:

On Dominica, even though the invaders were able to drastically reduce the Carib population, they failed in their attempt to completely eliminate the indigenous people. To survive, the Caribs were forced, except on rare occasions, to abandon the offensive and to avoid all contact with their murderers (Joseph 1997:214).

And other West Indians were also spared through isolation:

The Island-Caribs in the Windward Islands . . . were able to maintain their separate identity through the eighteenth century. The Spaniards left them alone, partially because their territory lacked gold and partially because the Island-Caribs, being expert raiders, were able to defend themselves against attack (Rouse 1992:159).

But isolation from European diseases was probably more important than isolation from sheer aggression for the Calusa. Not all native populations were decimated by European diseases within the first few decades of European Contact. One theory of differential response to diseases has been put forth by Ann Ramenofsky (1990) who bases her theory on Darwinian evolution. The persistence of disease is dependent not only on the host population, but also on the requirements of the disease agents for infection (Ramenofsky 1990:40).

Variability in settlement patterns is likely to affect disease transmission for selection in the spread of disease. Settlement location, duration, and form provide the basis for a matrix which Ramenofsky utilises in predicting impacts of European diseases on Native American settlements (Ramenofsky 1990:41-2). Therefore, settlements along heavily trafficked transportation routes and sedentary in nature (nucleated or dispersed) are predicted by Ramenofsky to suffer a high disease impact. Mobile settlements with a dispersed settlement pattern are thought by Ramenofsky to have a low disease impact (Ramenofsky 1990:42).

Ramenofsky's model relies on the assumption that disease agents are more likely to be transmitted via heavily used transportation and communication corridors and within sedentary settlements. The relatively sedentary Calusa were primarily located along navigable drainage and therefore, would fit Ramenofsky's profile for settlements likely to have a high disease impact. But due to the isolating factors I have outlined, the Calusa may have delayed their inevitable demise.

Larsen *et al.* (1990) turn to a multifactorial model of explanation for the reduction and eventual extinction of native Florida cultures which includes the negative impacts of an agriculturally-limited diet that emerged in North Florida. A diet limited in variability can cause susceptibility to anaemia, iron-deficiency, and other conditions which retard the immune system and the body's ability to recover from stresses. The varied Calusa diet may have provided them with a certain amount of fitness which may have lessened the impact of diseases and the threat of secondary infections.

Calusa cultural continuity was also aided by the unofficial trade relationship between South

Florida Indians and the Spanish. Evidence of trade with South Florida Indians dates to the 1617 letter written by the Franciscan missionaries in St. Augustine to the King of Spain. They complained of the trade of “amber” between the Florida governor and South Florida Indians which they charged thwarted any of their efforts to extend missions to southern Florida. They restate their complaints repeatedly in the letter. The issue of whether or not actual amber was the trade item requires further investigations. Amber is available in Mexico and the Dominican Republic. It is stated that Columbus was aware of the amber available in the Caribbean during his early explorations of the West Indies (See Appendix B).

At that point in time, the amber trade had reached great heights in Europe and it is conceivable that actual amber was the trade good. Alternative hypotheses exist which suggest that the substance was ambergris or possibly even resin. Since these products were also valuable, their use in trade could well have taken place. The importance in a trade relationship lies in the fact that trading implies something an equality of positions. Because the Spanish traded with the Indians rather than stealing from them or requiring a tax that would be paid with cherished goods, an independence is suggested.

Whilst also an elusive part of Southwest Florida history, the presence of Spanish Cuban fishermen probably predates the early 18th century. Cuban fishing banks were depleted by Spanish efforts to provide for colonists as well as extensive slave labour in the Caribbean. Turning to the plentiful estuary of Southwest Florida, the Spanish Cubans established several fisheries where fish were caught and processed for transport to Cuba. The Spanish also employed local Indians at the fisheries. Provisions brought for Cubans at the fisheries

were also available to some extent to the local Indians during the later historic period. It is unclear at this point in time whether Calusa Indians participated in the Cuban rancheros of Southwest Florida. Lower Creeks, today known as Seminole, moving into the area may have served at these fisheries. Further research into this matter would clarify this subject.

Nevertheless, in the early stages of European colonisation in Florida, isolation was crucial:

By 1577 the interaction of cultures had led to a degree of mutual acculturation between Spanish and Native Americans. It was, however, already evident that those Indians who most fully maintained their isolation and independence from the European invaders -- those who kept their shield raised against the Other -- had the best chance for continued cultural survival (Lyon 1990:292).

The Calusa were successful in maintaining both isolation and independence from the Spanish and in doing so, were able to survive as a culture into the 18th century.

CONCLUSIONS

Rooted deep in prehistory, the Calusa culture recorded by the Spanish at Contact was a complex, hierarchical chiefdom. The Southwest Florida coastal Calusa controlled most of the southern Florida peninsula and therefore, with great intensity the Spanish pursued a peaceful alliance with the Calusa. The Calusa reacted with hostility. This hostility was an expensive relationship for the Spanish — shipwreck survivors and shipwreck cargo from the New World were under the control of the Calusa who killed and sacrificed most of the survivors and divided the cargo. The New World cargo itself was the lifeline to Spain which was in economic turmoil.

Whilst Florida was an important location for the Spanish due to its proximity to the West Indies and the importance of shipping, the Spanish were unwilling to invest to any great degree in Spanish colonial settlements that could not support themselves and more importantly, were not producing valuable commodities such as silver and gold. Repeated efforts by the Spanish to convert the Calusa to Catholicism and thereby gain control of the Southwest Florida coast through minimal investment were fruitless. Menéndez's 1573 petition to enslave the South Florida Indians was also unsuccessful as a result of a changing Spanish policy towards New World natives.

Therefore, the issue of Calusa hostilities was an important one to Spain. Eventually, these hostilities forced the Spanish from South Florida. After early and intense contact with the Spanish, the nature of the Southwest Florida environment, the Calusa culture, and Spanish policy all colluded to distance the Calusa from the Spanish, resulting in a long period of

isolation.

Beginning in 1704 and ending in 1763 when only approximately 80 South Florida native families were living in the Keys, a number of migrations by South Florida natives to Cuba occurred. Hann suggests that the relationship between the Calusa fishermen in Southwest Florida and the natives had allowed a bond of trust to develop so that the Calusa turned to the Spanish for assistance when diseases and warfare threatened their existence (Hann 1991:325-333).

Unfortunately, the Calusa did not flourish in the Cuban environment. In 1711, 270 Calusa reportedly migrated to Cuba, but 3/4 of them soon died from diseases and poor living conditions in their new homeland (Hann 1991:325). In 1732, the South Florida Indians asked for transportation to Cuba, but when the boats arrived and after trading for rum and trade goods, the natives vanished into the wilderness, taking their houses with them. This failed migration attempt may reflect their fears of perishing as others had in Cuba (Hann 1991:325).

Ultimately, the isolation that the Calusa experienced may have prevented or curbed the spread of European diseases which were fatal to Native Americans, but only temporarily. Therefore, the Calusa did not immediately face the deculturation that destroyed so many Southeastern U.S. cultures. The fate of the Calusa seems to have been delayed as a result of isolation, but by the mid-18th century, they appear to have fallen victim to European diseases and the infiltration of their territory by northern tribes. By 1743 during a final mission effort in South Florida, only a small band of natives identified themselves as Calusa

and probably represented the last of a culturally distinct Calusa society.

Recommendations for Future Studies and Conclusions

The use of spatial analyses can also contribute to a better understanding of the archaeological record. A key consideration is the organization and use of space over time -- the construction, maintenance, and abandonment of house structures, extramural space, public buildings, midden deposits, and mortuary complexes across the landscape. A problem with this line of study arises with the continued separation of prehistoric and historical archaeology because direct comparisons regarding use of space become difficult. Each 'subfield' is consumed by different research objectives and methodologies which often result in non-comparative results.

Lightfoot turns to spatial organization to untangle culture change in pluralistic colonies. He states that:

What is needed is a diachronic 'contextual' approach that examines changes in the ideological structure of people in prehistoric, proto historic, and historic contexts. I believe that such an approach can be implemented by considering the broader spatial organization of the archaeological record... (Lightfoot 1995:207).

In studying the Calusa culture, the use of spatial analysis may prove useful in identifying changes in settlement patterns as well as smaller scale intra-site cultural changes.

The spatial analysis of material culture today embraces a *phenomenological approach* which sees material culture as created by people who are also moulded by existing material culture. It represents a recursive relationship rather than a deterministic one. Within the

phenomenological approach, there are three scales of material culture which can be identified: artefact, built environment, and landscape. Culture, then, is affected by material culture on various levels.

By studying material culture in this way, as phenomenon, it becomes clear that objects are no longer seen as passive. Material culture plays a role within a culture. Just as a burning cross on a lawn in America is more than just a piece of wood aflame, so too material culture is more than merely a collection of human constructs.

The direct historic approach should be further employed as additional data become available concerning cultural components at Calusa archaeological sites. I believe that there may, in fact, be a large repository of Spanish documents in Cuba. Without having undertaken any investigations into this area, this opinion is based on the amount of time spent by Calusa nobles in Havana as well as the purported effort of the missionaries to establish a school in Cuba for the Hispanicisation of native youths. In addition, Father Juan Rogel studied the Calusa language in Havana before traveling to the Southwest Florida coast and perhaps it is in Havana where historic documents concerning the Calusa language may exist.

As information on the Calusa culture accumulates, obviously our understanding of these coastal dwelling people will become more three-dimensional. Using the data currently available, the ethnohistoric archaeology approach provides maximum flexibility in extracting and uniting information from various sources.

APPENDIX A

GENERAL OVERVIEW OF THREE MAJOR CALUSA SITES

Calusa Site features

Large Calusa sites such as those found within the Calusa “Heartland” appear to have similar features. Shell mound complexes cover much of the sites and the largest shell mounds at each site have been thought to represent the platform temple mounds and the cacique’s habitation mound. In addition, the sites appear to be divided by a central canal into opposing complexes.

Mound Key, Pineland, and Key Marco are three large Southwest Florida sites discussed within this appendix. These sites may have served as ceremonial sites -- perhaps even simultaneously. Features common to Mound Key and the Pineland site are: the division of the site by an aboriginal canal; sand burial mounds; near year-round sedentary behaviour; extensive shell tool kit; and dependence upon estuarine resources without the use of agriculture. Key Marco is at the edge of the Calusa “Heartland” and at the least, represents a closely-related culture. Further research will clarify its exact location within the Calusa regional structure.

Mound Key: Capital of the Calusa?

Covering 125 acres, Mound Key is located roughly in the centre of Estero Bay (see Figure A1). Long-believed to be the capital of the Calusa kingdom, Mound Key has undergone very little professional archaeological undertakings. Descriptions of the location of the Calusa capitol in early Spanish documents and the presence of early Spanish artefacts

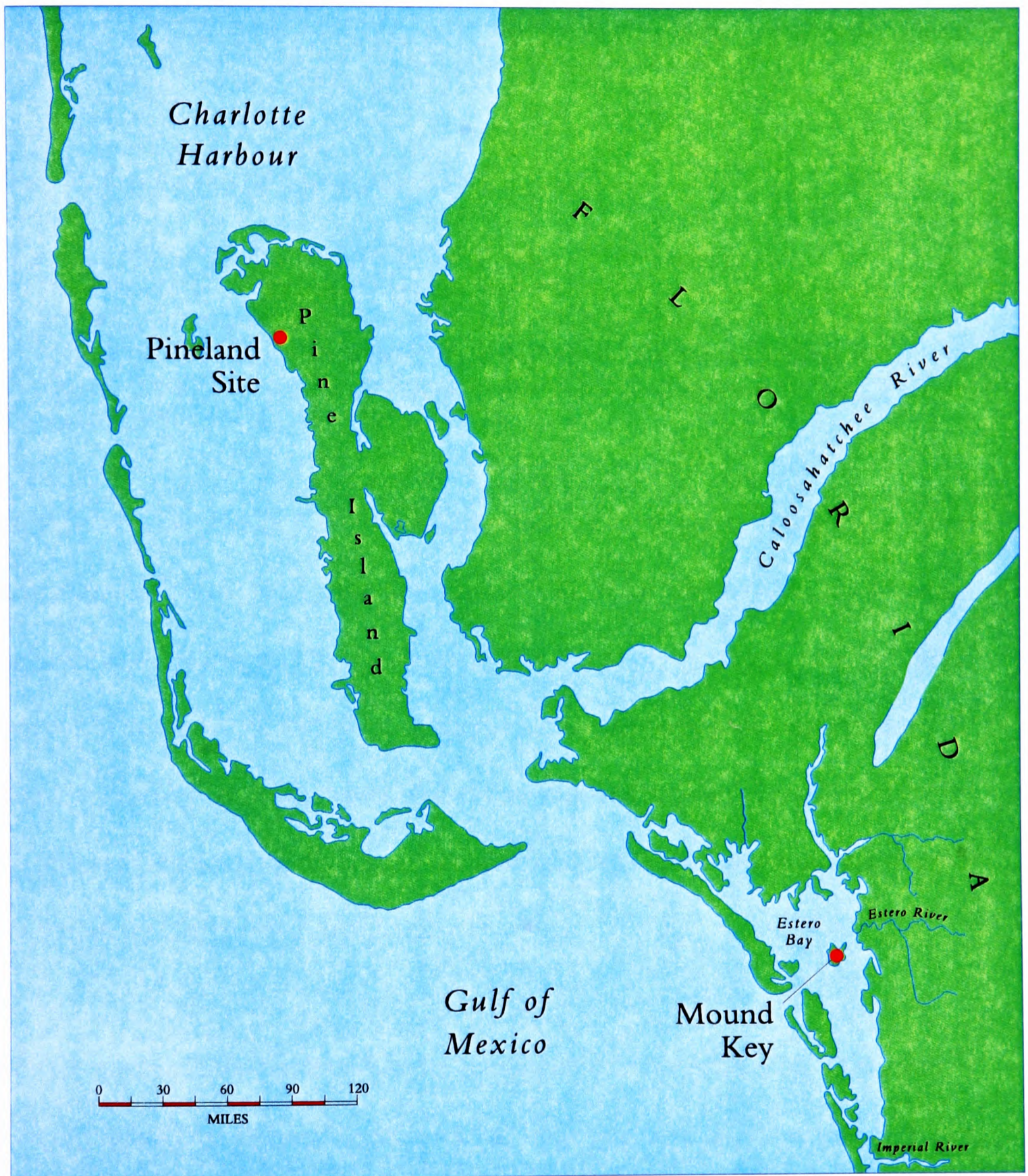


Figure A1. Locational Map of Mound Key and Pineland Sites

reported at the site have bolstered the theory that Mound Key was the Calusa capital referred to by European chroniclers. The fact that site features at Mound Key developed over a period of centuries means that the appearance of this island has continuously changed through time.

Torrence *et al.* provide a general description of Mound Key:

American Indians were probably living on Mound Key by A.D. 100, perhaps earlier. They discarded their food shells, fish bones, broken tools, and pots, forming large garbage heaps called middens. Some of the middens were deposited in a specific manner to form mounds, platforms, terraces, and ridges. Some of the mounds attained remarkable heights, over 30 feet (9 meters) tall (1994:4).

All these features (see Figure A2) are believed to have been integral to Mound Key during its height when first visited by the Spanish in 1566. One main central canal divides Complexes I and II at Mound Key -- a pattern seen at other major Calusa sites in the Calusa "Heartland"(Torrence *et al.* 1994:41). In addition, there are three additional distinct shell mounds identified by Torrence *et al.* as well as two sand burial mounds, and canal features which appear to extend from the edge of the island inwards. Shell ridges generally spiral outward from the shell mound complexes.

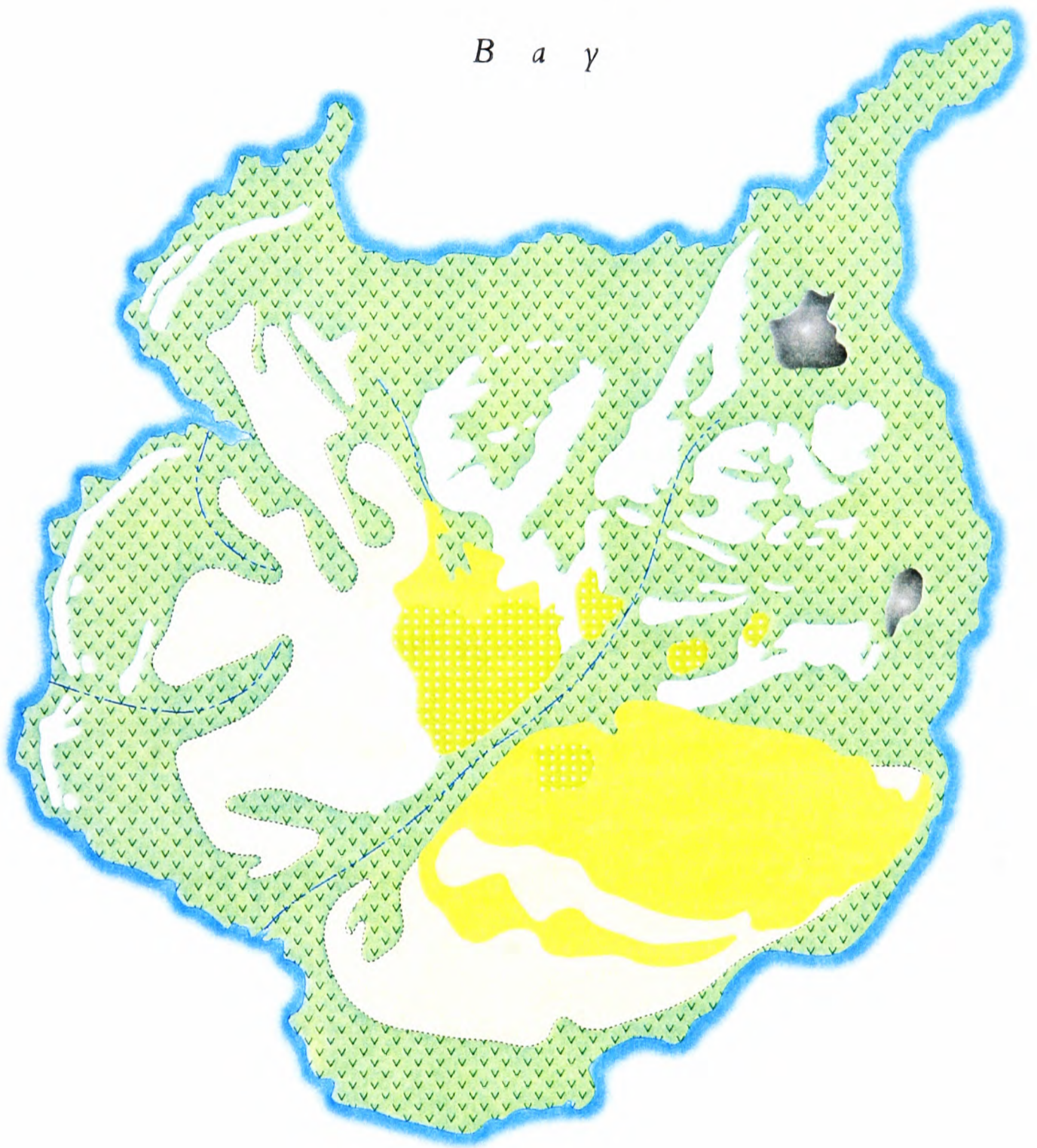
Despite the apparent importance of this site during protohistoric times, only a very limited amount of professional archaeological work has been conducted at Mound Key. Future work will aid in our understanding of Mound Key and its role within the Calusa culture.

Pineland

The Pineland site is located on the northwest shore of Pine Island in Pine Island Sound,

E s t e r o

B a y









-  Burial Mound
-  Shell Mound
-  Shell Plaza
-  Mangroves
-  Interface of extensive low shell elevation/mangrove
-  Canal features

Figure A2. Generalised Site Map of Mound Key
(based on Torrence et al. 1994)

covering 162 acres (see Figure A1). It consists of shell middens and mounds as well as an aboriginal canal which generally divides the site into two large shell mound complexes: the Brown's Complex and the Randell Complex (Walker 1995a:7.1-2) (see Figure A3). This aboriginal canal crosses the entire northern end of Pine Island and provides access between Pine Island Sound and Matlacha Pass. At Pineland there exists one sand burial mound and a second sand mound also believed to have also been used for burials (Walker 1995a:7.2).

As noted at Mound Key, Walker contends that, "Pineland's components represent different periods of the Caloosahatchee Sequence. Thus, Pineland's appearance varied through time" (1995a:7.3). Further, Walker points to evidence which suggests that the earliest occupation of Pineland at circa A.D. 100-350 was in the southeastern portion of the site *sans* shell mounds (1995a:7.6). By ca. A.D. 550, the Pineland site was fully occupied and undergoing the rapid accumulation of shell middens and mounds. The shell middens provided a location on which houses were built (Walker 1995a:7.6-7).

Mound Key and the Pineland site are both large archaeological sites which have received interest from the archaeological research community. Both sites appear to have played an important role in Calusa society based on the size of the sites and the presence of features which suggest the investment of much cooperative labour towards preconceived goals. Additionally, the use of a canal to divide the site into two shell mound complexes occurs at both Mound Key and Pineland, suggesting a purposeful positioning of features.

Key Marco

The Key Marco site is located just south of the area considered the Calusa "Heartland." The

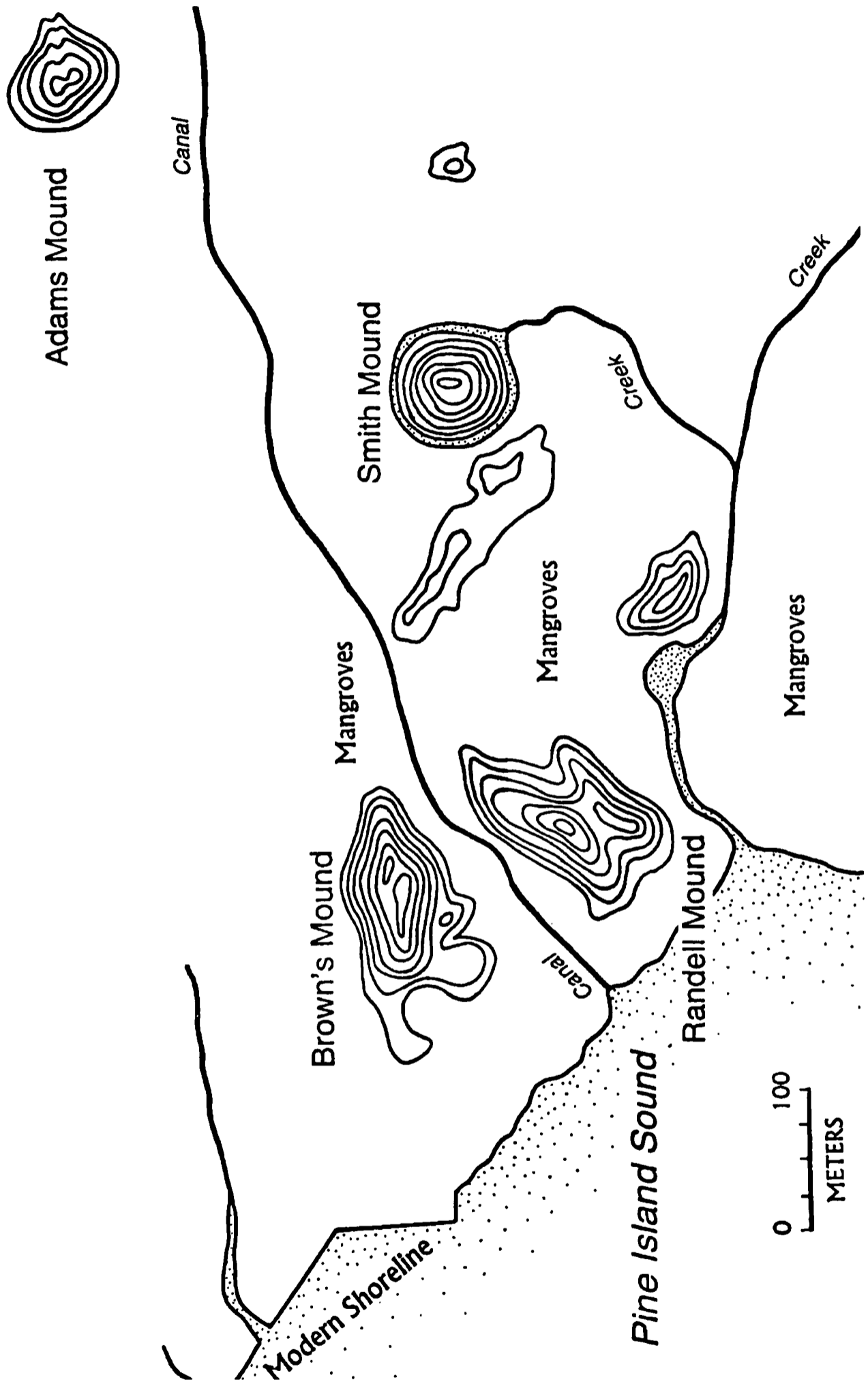


Figure A3. Generalized Site Map of the Pineland Site (from Payne and Blanchard 1997:13)

fortuitous discovery of the Key Marco site ultimately resulted in one of the most important archaeological excavations in North America. During the 1890s, Southwest Florida was gaining a reputation as a fishing and game hunting haven. In 1895, British Lt. Col. C.D. Durnford was enjoying the local tarpon fishing when his interest in antiquities was piqued by word of the discovery of ancient wood artefacts found in the mangrove muck at Key Marco. Durnford immediately set out for the reported site where he recovered a small number of remarkable artefacts, including fibre-cordage and netting, fragments of gourd, wooden blocks, billets, slats, box sides, and tray, float pegs attached by cordage, fish spines, pottery sherds, shell tools, and a shell net weight (Snapp 1994).

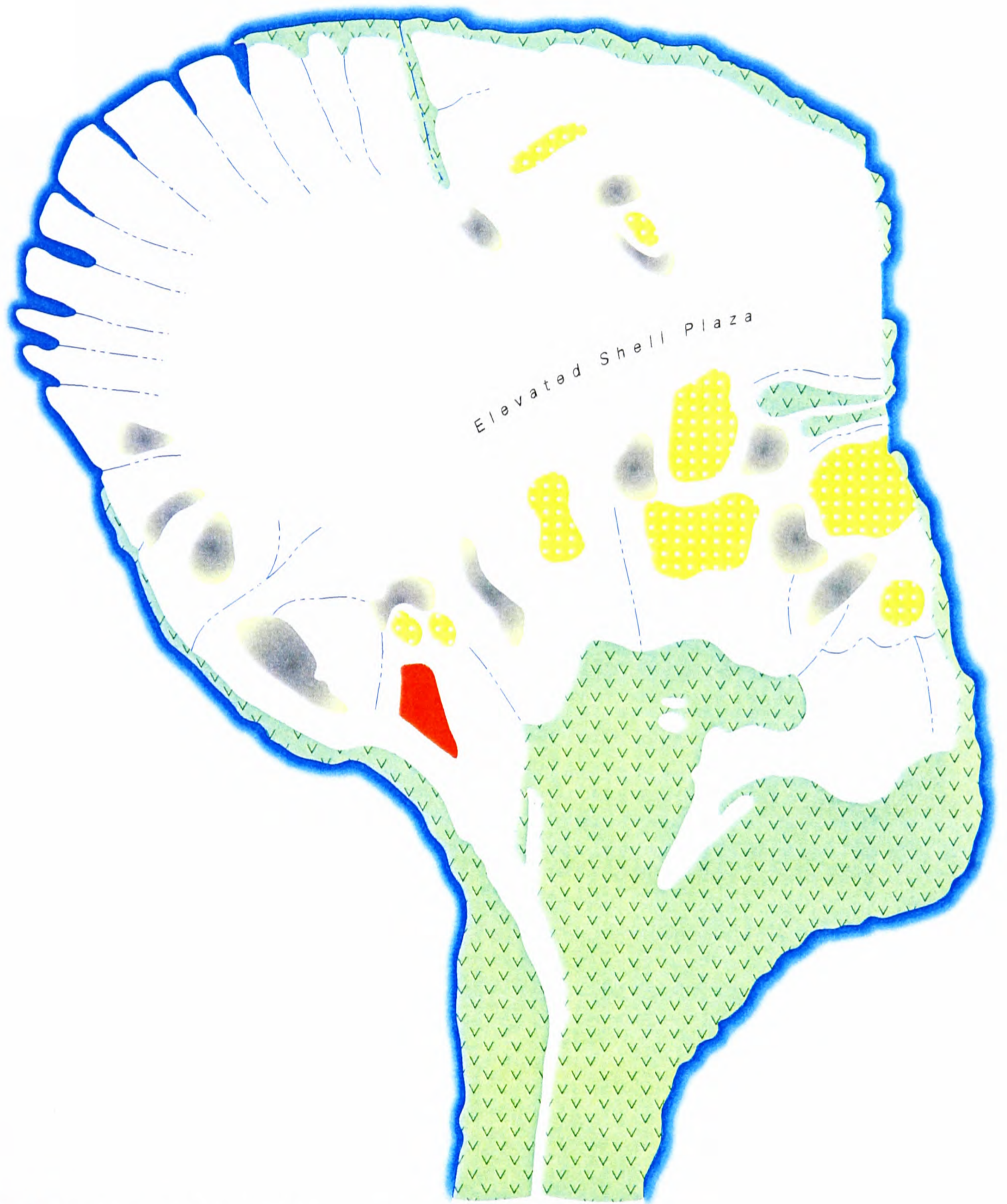
Durnford took this Key Marco collection to the University of Pennsylvania's museum in order to confirm their antiquity. Frank Hamilton Cushing, after viewing Durnford's collection (now housed in the British Museum), was aware of the significance of the artefacts and the importance of the Key Marco site.

In 1896, Cushing undertook excavation work at Key Marco. His work was greatly rewarded with the discovery of thousands of wooden artefacts and a great variety of other artefacts. The rare preservation of organic materials as well as broad representation of both sacred and secular objects have made this collection truly unique. Today, Key Marco continues to be considered one of the most important sites in North America.

The Key Marco site consisted of shell mounds and complexes, shell ridges, canal features, and circular depression features. Cushing's description provides an informative overview of the Key Marco site:

Marco inlet, or the eastward and southward extension of Big Marco Pass, formed to the northeast and east of Key Marco a comparatively wide, deep bay. The edge of the key along this bay had evidently been worn away to some extent, so that its eastern face afforded in places sectional views of its structure that told the same story with regard to this key that my excavations had told me with regard to Demorey's and the little keys in the neighborhood of St James City; namely, that although far more extensive and quite lofty, this, no less than they, had been built from the very sea level upward. Two or three straight, deep, and regular canals led in from this side also, one in particular, directly through the loftier terraces here, to the central elevation of the place. This reached a height of only eighteen or nineteen feet, yet it was remarkably regular, nearly parallelogrammic, flat-topped, and upon its level summit stood -- in place, probably, of the ancient temple that once surmounted it (for there occurred here, as on the pyramid-platform of Demorey's key, an altar-like mound near the northern end) -- the house now occupied by Captain Cuthbert, part owner, with Captain Collier, of Key Marco. A graded way descended slantingly across the lower end of this eminence, into what had first been a central court... This, however, had in course of time been filled purposely, and the canal that had led straight into it from the south had been filled in too, so as to form a prolongation of the graded way down to the edge of the great court or muck-filled bayou that was embraced within the two lateral and southern extensions of the key. In the southeastern portion of these broad flat canal-seamed extensions, might be seen still two or three remarkably regular and deep circular tanks or çenotes, as I have called them, whence straight sunken ways led up to the easternmost of the series of broad foundations and mounds that, with other filled-in garden courts between, flanked the central eminence or temple-pyramid on either side. Just inside of the sea wall that protected the western edge of the key occurred the little triangular muck-court which had been dug into first by Captain Collier, Mr. Wilkins, and Colonel Durnford (Cushing [1896] 1973:349-50).

In Figure A4 I have utilized Wells Sawyer's 1896 topographic survey of Key Marco in an effort to provide a map showing the general location of major site features. Striking shell mound complexes with heights which according to Sawyer's map reach 10 to 12 feet and comprise the central and south-central elevated areas of the site. The depressions occur around the mound complexes, and in some cases, appear to be ringed by shell ridges. Canal features appear to extend from the edge of the key inwards. At one time, a north-south canal may have bisected the site, resulting in eastern and western mound complexes. The pattern of a bisecting canal resembles that seen at both Mound Key and Pineland.



- Location of Cushing's 1896 Excavation
- Mangroves
- Depression
- Shell Mound
- Shell Plaza
- Canal features

Figure A4. Generalised Site Map of Key Marco
 (based on Sawyer in Cushing 1973 [Orig. 1896]: Plate XXX)

Despite the removal of portions of the Key Marco site for use as road and construction fill and the virtual re-contouring and reconfiguring of the island for residential development, Randolph Widmer has successfully undertaken salvage excavation at Key Marco. Widmer's research revealed the remnants of a truncated pyramidal mound which was in use from A.D. 500 to A.D. 900. Finding evidence of sequential construction which led to the expansion vertically and horizontally of the mound, Widmer views this continuity through time as evidence of a chiefdom as early as A.D. 500 (Widmer 1996:24). Therefore, Widmer believes that the Key Marco site was occupied by a chiefdom-level society for at least 1000 years. Thus, Cushing's Key Marco collection may represent several different time periods instead of one specific time period (Widmer 1996:24-5).

As a result, the chronological placement of the Key Marco site has been problematic. Its earliest occupation remains unknown. To date, no historic artefacts have been recovered which suggests that its terminal date is no later than the late fifteenth century (Gilliland 1989b:38). The material culture remains recovered by Cushing are today believed by some to date to an early form of SECC-influenced South Florida culture (Gilliland 1989b:39-42).

These three major Calusa sites are similar in form and features. They represent a coastal expression of the Calusa culture while interior sites continue to be less well understood. Archaeological investigations of the Southwest Florida coast continue today with a focus on the issue of the Calusa settlement pattern amongst other queries.

APPENDIX B

THE AMBER TRADE

The question of amber as a trade item has been the subject of speculation amongst Florida archaeologists. Because there are no sources of true amber in Florida, it has been speculated that ambergris washed up on the Atlantic beaches from whales which is used in the production of perfume was the actual trade item. Added to the confusion is the fact that resins are oftentimes mistaken for true amber.

Moulded or carved resin artefacts have been recovered from aboriginal burials in Costa Rica (Langenheim and Balsler 1975). Resinous materials were used in some cases to create figurines. Amber beads, some of which have been found to originate from the Baltic Sea area, have also been found in Central America (Costa Rica and Belize) (Langenheim and Balsler 1975 and Lambert *et al.* 1994). This illustrates the widespread nature of the problem of identifying amber in contrast to resins, both of which have been found in protohistoric deposits in the New World.

Amber is considered a semiprecious stone, and is believed to be the fossilized resin of coniferous trees. The process which leads to the formation of amber is not fossilization *per se*. But it does involve burial beneath sediments which prevent the resin from being exposed to oxygen over a period of millions of years. In addition to coniferous trees, some tropical broad-leaf trees have produced resin that was transformed into amber (Grimaldi 1996:12-13). It is in the form of resin that insects and other animals become trapped within the sticky resin substance. When uncovered millions of years later in the form of amber, trapped

insects and other animals can look as fresh as the moment they were captured in the resin (Grimaldi 1996:14).

Copal is hardened resin which has not yet reached the stage of amber. Rather than millions of years old, it is thought to be hundreds or thousands of years old. Subsequently, copal is not as hard as amber, and its surface crazes more quickly from exposure to the air (Grimaldi 1996:16).

Trade in amber has a long history in Europe. Up until the 18th century, the amber trade was important in the production of religious works (including rosaries), art works, and for medicinal as well as mystical properties. Therefore, any interest the Spanish may have had in true amber was probably linked to the economic value of amber within the European amber market.

The Baltic Sea has the largest deposit of amber known and it has been used by people for millennia — from prehistoric times through the present day (Rice 1980:40-1). Prehistoric archaeological artefacts made of amber attest to the fascination of this stone. Whilst generally unfit for any other use than decorative and talismanic value, amber has in European history reached a height in popularity which put it on a similar level as gold — if not more valuable than gold itself at certain times. It is this history of the use of amber which sheds light on its importance to the Spanish at the time of the New World conquest.

Rice states that:

In the early civilizations of the early Greeks and Romans, amber was so

revered it was available only to nobility. Ladies of the Roman court desired it for its brilliant hue and for the protection from evils spells which it was believed to bestow upon the wearer. In reverence to its talismanic powers, gladiators wore amber amulets when venturing into the Coliseum. Throughout Europe, amber was worn as protection against various and sundry illnesses (Rice 1980:3).

When amber is rubbed, it produces a static electricity which in turn draws small particles towards it. Because of this characteristic, the Greeks called amber “elektron” from which the word “electricity” was derived. Amber can also be burnt for use as incense (Rice 1980:7).

Neolithic cultures along the Baltic Sea have utilized amber in adornments as early as 5000 years ago. But by 3000 B.C., trade had already begun with regions beyond the Baltic. Copper and bronze were traded for amber and those along the Baltic coast began using these metals whilst interior cultures continued to use stone tools. From 1800 B.C. — 1200 B.C., amber trade routes had been established throughout Europe via riverways (Rice 1980:29-35).

The Roman Empire took an even greater interest in amber. Rice states that:

At the beginning of Nero’s reign, the demand for amber was so great that to obtain a supply for gladiatorial exhibitions, a Roman knight was sent to the north in search of the actual source. Some historians believe this to be one of the most significant historical events of the Roman era because it opened direct trade with Baltic cultures near the Vistula River. The manager of the gladiatorial spectacles, Julianus, commissioned the Knight to cross barbarian territories, a feat never before attempted by a Roman (Rice 1980:43).

Large caches of Roman coins found in the Baltic region and dating from 138 A.D. to 180 A.D. suggest this to be a peak period of trade with Rome. Trade of Baltic amber to the Mediterranean ended with the Dark Ages and the collapse of the Roman Empire (Rice

1980:44-5).

Once considered the property of the finder, most amber within the Baltic Sea region around 1200 A.D. was claimed by the Dukes of Pomerania. Soon thereafter, control of amber was awarded to the Knights of the Teutonic Order who successfully restored Christianity to the region by force. Any amber found was thus claimed by the Knights who gave little in return (Rice 1980:52).

The Knights of the Teutonic Order proceeded to develop an amber monopoly in order to organize the amber rosary trade to yield a greater profit. Amber guilds were then established to serve as craftsmen of amber religious objects. Shifts in political and religious control of the area in the 1500s resulted in the loss of the rosary business with Duke Albert of Prussia taking control of the amber monopoly (Rice 1980:53-5).

Duke Albert attempted to revive his amber monopoly by encouraging new artistic works and investigating its medicinal value. He finally sold the monopoly to a merchant firm, leading to conflicts with certain guilds who complained about the quality of amber supplied to them (Rice 1980:56-8). At this point in time, guild masters were held in high regard. By the mid-seventeenth century, amber artisans were displaying great ingenuity and ability. And it was 1642 before the amber monopoly ended and the possession of amber was returned to the state (Rice 1980:58-60).

Amber trade dropped steadily, although the amber guilds continued to operate (Rice 1980:61). By the 18th century, demand for amber art works had declined as the amber guilds

began to fight amongst themselves. It is during this time that:

In 1713 King Frederick William I exhibited the most spectacular of all works of amber art — an entire room, including walls, ceiling and doors, covered with mosaics of amber pieces of varying shapes and hues (Rice 1980:62).

True amber is mined in the Dominican Republic and in Mexico. Columbus was presented with amber from the Taino people when he landed on Hispaniola and therefore was aware of its presence there (Grimaldi 1996:62).

The main deposits of amber in the Dominican Republic are located in the Monte Cristi Range of mountains which are located near the northeast coast of Hispaniola. The mining activities in this area are difficult due to the mountainous terrain (Rice 1980:180). Despite this difficulty, “Today the Dominican Republic is the most plentiful source of amber outside of the Baltic area” (Rice 1980:190).

As a trade item mentioned by in Spanish documents, amber is considered a problem by the missionaries in the early 17th century who write to the king in 1617 that:

. . . in the latter [Calusa territory] because of the greed for the amber that is found on this coast, as it appeared to the governors that their interests would suffer by this path [being followed], setting more value on the corruptible and the vain than on the incomparable treasure of so many souls as have been lost and will be lost with these [steps] (Pareja, Matinez, Rruiz Desquera, de la Cruz, Moreno de Jesus and Romero [1617] in Hann 1991:13).

Additionally, Hann states that, “. . . if the friars’ charges about the amber trade are valid, informal contact may have continued. Governor Rebolleda purchased amber in the latter half of 1654, but on that occasion the natives who supplied the amber lived ‘on the seashore close to the Bahama Channel’” (Hann 1991:131).

It is my belief that this was true amber which the South Florida Indians traded to the Spanish. Because amber was at one time valued as highly as gold by Europeans, it may have been the only opportunity for the Spanish to pursue fortune in Florida. Although the nearest amber sources are located in the Dominican Republic, it would be reasonable to conclude that the South Florida Indians may have hidden their source. Or because the extraction of amber in the Dominican Republic requires intensive labour, the Spanish may have been satisfied to trade for the amber extracted by the Indians without actively participating themselves in the mining. The South Florida Indians were probably content to trade valuable amber for inexpensive European trade materials.

Obviously, this trade between the Spanish and the South Florida Indians was viewed as important to the Spanish administrative staff and missionaries believed they would do anything to block the establishment of new missions in South Florida since it would disrupt this valuable trade.

Further research into this area of trade to definitively determine the materials traded and to better understand the affects of such a trade is necessary. With respect to this study, if this trade helped to maintain an independent status for the Calusa apart from Europeans, then this trade relationship can be seen as a reinforcing factor of isolation.

BIBLIOGRAPHY

- Abell, Walter
1946 "Stone Disks As Treaty 'Suns'" in American Antiquity, vol. XII, no. 1:1-9.
- Abrahamson, Warren G. and David C. Hartnett
1990 "Pine Flatwoods and Dry Prairies" in Ecosystems in Florida, Myers and Ewel, eds., 103-149. Orlando: University of Central Florida.
- Adams, Robert McC.
1974 "Anthropological Perspectives on Ancient trade" in Current Anthropology, vol. 15, no. 3:239-258.
- Anderson, David G. and Kenneth Sassaman, eds.
1996 The Paleoindian and Early Archaic Southeast. Tuscaloosa: University of Alabama Press.
- Allerton, David, George M. Luer and Robert S. Carr
1984 "Ceremonial Tablets and Related Objects from Florida" in The Florida Anthropologist, vol. 37, no. 1:5-54.
- Austin, Robert J.
1987 "An Archaeological Site Inventory and Zone Management Plan for Lee County, Florida." Report for the Lee County Department of Community Development, Ft. Myers, FL by Piper Archaeology. On file, Lee County Department of Community Development, Fort Myers, FL.
- Barcia, Andrés de
1970 Barcia's Chronological History of the Continent of Florida, Anthony Kerrigan, trans. Westport, CT: Greenwood Press, Publishers. Originally published in 1723.
- Bartram, William
1955 Travels of William Bartram, Mark Van Doren, ed. New York: Dover Publications, Inc. Original edition, 1791.
- Beaudry, Mary C., ed.
1993 Documentary Archaeology in the New World. Cambridge (UK): University Press.
- Bellomo, Randy V.
1992 "1992 Update of An Archaeological and Zone Management Plan for Lee County, Florida." Report for the Lee County Department of Community Development, Ft. Myers, FL by Janus Research/Piper Archaeology. On file, Lee County Department of Community Development, Fort Myers, FL.

- Bense, Judith A.
 1994 Archaeology of the Southeastern United States. San Diego: Academic Press, Inc.
- Benson, Elizabeth P., ed.
 1977 The Sea In The Pre-Columbian World: A Conference at Dumbarton Oaks October 26th and 27th, 1974. Dumbarton Oaks Research Library and Collections. Washington D.C.: Trustees for Harvard University.
- Benson Elizabeth P. And Beatriz de la Fuente, eds
 1996 Olmec Art of Ancient Mexico. New York: Harry N. Abrams, Inc.
- Bishop, Morris
 1971 The Odyssey of Cabeza De Vaca. Westport, CT: Greenwood Press, Publishers. Original edition 1933.
- Bonini, Miguel A.
 1997 "A Cooperative Ball Court Study in Puerto Rico." CRM -- Cultural Resource Management: Information for Parks, Federal Agencies, Indian Tribes, States, Local Governments, and the Private Sector, vol.20, no.11:59-60.
- Brain, Jeffrey P.
 1988 Tunica Archaeology. Cambridge: Harvard University Press.
- Brown, Robin C
 1994 Florida's First People. Sarasota: Pineapple Press, Inc.
- Bullen, Ripley P.
 1961 "Radiocarbon Dates for Southeastern Fiber-Tempered Pottery." American Antiquity 27:104-6.
 1978 "Pre-Columbian Trade in Eastern United States As Viewed from Florida," in The Florida Anthropologist, vol. 31, no. 3:92-108.
- Bushnell, David I. Jr.,
 1920 "Native Cemeteries and Forms of Burial." Bulletin 71. Washington D.C.: Bureau of American Ethnology.
- Cameron, Catherine M. and Steve A. Tomka, eds.
 1996 Abandonment of settlements and regions: Ethnoarchaeological and archaeological approaches. Cambridge (UK): University Press. Original edition, Cambridge: University Press, 1993.
- Carr, Robert S., David Dickel, and Marilyn Masson
 1995 "Archaeological Investigations of the Ortona Earthworks and Mounds" in The Florida Anthropologist 48(4):227-264.

- Carstens, Kenneth C. and Patty Jo Watson, eds.
 1996 Of Caves and Shell Mounds. Tuscaloosa and London: University of Alabama Press.
- Carter, Luther J.
 1974 The Florida Experience: Land and Water Policy in a Growth State. Baltimore and London: John Hopkins University Press.
- Cavalli-Sforza, L. Luca, Paolo Menozzi, and Alberto Piazza
 1994 The History and Geography of Human Genes. Princeton: Princeton University Press.
- Chanca, Dr.
 1969 Letter written to the City of Seville in The Four Voyages of Christopher Columbus, J.M. Cohen, ed. and trans. London: Penguin Books.
- Chapman, Anne M.
 1965 "Port of Trade Enclaves in Aztec and Maya Civilizations" in Trade and Market in the Early Empires Trade and Market in the Early Empires: Economics in History and Theory, Karl Polanyi, Conrad M. Arensberg and Harry W. Pearson, eds., 114-153. New York: The Free Press.
- Claasen, Cheryl
 1993 "Sourcing *Busycon* Artifacts of the Eastern United States" in American Antiquity, 58(2):333-347.
 1996 "Research Problems with Shells from Green River Shell Matrix Sites" in Of Caves and Shell Mounds Kenneth C. Carstens and Patty Jo Watson, eds., 132-9. Tuscaloosa: The University of Alabama Press.
- Clark, Merald R.
 1995 "Faces and Figureheads: The Masks of Prehistoric South Florida" M.A. thesis, University of Florida, Gainesville.
- Cohen, J.M., ed. and trans.
 1969 The Four Voyages of Christopher Columbus. London:Penguin Books.
- Colon, Hernando
 1969 "The Life of the Admiral by his son, Hernando Colon" in The Four Voyages of Christopher Columbus, J.M. Cohen, ed. and trans. London: Penguin Books.
- Connor, Jeannette Thurber, ed. and trans.
 1925 Colonial Records of Spanish Florida: Vol. I 1570-1577, Jeannette Thurber Connor, trans. and ed., Deland: Florida State Historical Society.

- Cook, Fred C. and Charles E. Pearson
 1989 "The Southeastern Ceremonial Complex on the Georgia Coast" in The Southeastern Ceremonial Complex: Artifacts and Analysis, Patricia Galloway, ed., 147-165. Lincoln and London: University of Nebraska Press.
- Cooke, Jean, Ann Kramer, and Theodore Rowland-Entwistle
 1996 History's Timeline. Fay Franklin, ed. Hong Kong: South China Printing Co.
- Cordell, Ann S.
 1992 "Technological Investigations of Pottery Variability in Southwest Florida" in Culture and Environment in the Domain of the Calusa, William H. Marquardt, ed. with the assistance of Claudine Payne, 105-189. Gainesville: Monograph Number 1, Institute of Archaeology and Paleoenvironmental Studies, University of Florida.
- Cortés, Hernando
 1991 Hernando Cortés: Five Letters. J. Bayard Morris, trans. New York and London: W.W. Norton & Company.
- Curet, L. Antonio
 1996 "Ideology, Chiefly Power, and Material Culture: An Example from the Greater Antilles." Latin American Antiquity, vol. 7, no. 2:114-131.
- Cushing, Frank Hamilton
 1973 Antiquities of the New World: Early Explorations in Archaeology, Volume 13, "Exploration of Ancient Key Dwellers' Remains on the Gulf Coast of Florida." New York: AMS Press, Inc. Original edition, Proceedings of the American Philosophical Society V.35, No.153, 1896.
- Dalton, George, ed.
 1967 Tribal and Peasant Economies. Garden City, NY: The Natural History Press.
- Davis, R.A.
 1997 "Geology of the Florida Coast" in The Geology of Florida, Anthony F. Randazzo and Douglas S. Jones, eds., 155-168. Gainesville: University Press of Florida.
- Deagan, Kathleen
 1985 "Spanish-Indian Interaction in Sixteenth-Century Florida and Hispaniola" in Culture in Contact: The European Impact on Native Cultural Institutions in Eastern North America, A.D. 1000 - 1800, William W. Fitzhugh, ed. & comment, 281-318. Washington & London: Smithsonian Institution Press.
- 1995 Puerto Real: The Archaeology of a Sixteenth-Century Spanish Town in Hispaniola. Gainesville: University of Florida Press.

Deetz, James

- 1995 Flowerdew Hundred: The Archaeology of a Virginia Plantation 1619-1864. Charlottesville and London, University of Virginia.

De Landa, Diego

- 1978 Yucatan Before And After The Conquest. William Gates, trans. New York: Dover Publications. Original transcript "Relación de las cosas de Yucatan," 1566.

De Las Casas, Bartolomé

- 1969 "Digest of Columbus's Log-Book on His First Voyage" in The Four Voyages of Christopher Columbus, J.M. Cohen, ed. and trans. London: Penguin Books.

- 1992 A Short Account of the Destruction of the Indies. Nigel Griffin, ed. and trans. St Ives plc: Clays Ltd.

De La Vega, Garcilaso

- 1996 The Florida of the Inca. John and Jeannette Varner, trans. Austin: University of Texas Press.

De Prado, Antonio

- 1925 Memorial on Four Forts of Florida Presented to Her Majesty, Madrid, dated November 16, 1569 in Colonial Records of Spanish Florida: Vol. I 1570-1577, Jeannette Thurber Connor, trans. and ed., Deland: Florida State Historical Society.

Dibble, Ernest F. And Earle W. Newton, eds.

- 1971 Spain and her Rivals on the Gulf Coast. Pensacola: Historic Pensacola Preservation Board.

Dickinson, Jonathan

- 1985 Jonathan Dickinson's Journal. Port Salerno: Florida Classics Library. Original edition, Yale University Press, 1945.

Dobyns, Henry F.

- 1991 "The Invasion of Florida: Disease and the Indians of Florida" in Spanish Pathways in Spain/ Caminos Españoles en La Florida, Ann L. Henderson and Gary R. Mormino, eds., 58-76. Sarasota, FL: Pineapple Press, Inc.

Doran, Glen

- 1992 "Problems and Potentials of Wet Sites in North America: The Example of Windover" in The Wetland Revolution, Bryony Coles, ed., 125-134. The Prehistoric Society and WARP (Wetland Archaeology Research Project). Exeter, UK: Short Run Press, Ltd.

- Doran, Glen H., David N. Dickel, and Lee A. Newsom
 1990 "A 7,290-Year-Old Bottle Gourd From the Windover Site, Florida" in American Antiquity 55(2):354-360.
- Drucker, Philip
 1967 "The Potlatch," in Tribal and Peasant Economies George Dalton, ed.. 481-493. Garden City, NY: Natural History Press.
- Duke, James A.
 1981 Handbook of Legumes of World Economic Importance. New York and London: Plenum Press.
- Earle, Timothy
 1994 "Political Domination and Social Evolution" in Companion Encyclopedia of Anthropology, pp.940-961. London and New York: Routledge.
- Edic, Robert F.
 1996 Fisherfolk of Charlotte Harbor, Florida. Canada: University of Florida, Florida Museum of Natural History.
- Elliott, J.H.
 1990 Imperial Spain:1469-1716. St Ives plc: Clay Ltd. Original edition, Edward Arnold, 1963.
- Emerson, Thomas E.
 1989 "Water, Serpents, and the Underworld: An Exploration into Cahokia Symbolism" in The Southeastern Ceremonial Complex: Artifacts and Analysis, Patricia Galloway, ed., 45-92. Lincoln and London: University of Nebraska Press.
 1997 Cahokia and the Archaeology of Power. Tuscaloosa: University of Alabama Press.
- Fabel, Robin F.A.
 1988 The Economy of British West Florida, 1763-1783. Tuscaloosa: University of Alabama Press.
- Fitzhugh, William W., ed. and comment.
 1985 Cultures in Contact: The European Impact on Native Cultural Institutions in Eastern North America, A.D. 1000 - 1800. Washington & London: Smithsonian Institution Press.
- Fontaneda, Do. d'Escalante
 1973 "Memoir of Do. d'Escalante Fontaneda Respecting Florida, Written in Spain, About the Year 1575." Buckingham Smith, trans. (1854). Annotated by David O. True. Coral Gables: Glades House. Original edition 1944.

- Ford, James A.
 1966 "Early Formative Culture in Georgia and Florida" in American Antiquity 31(6):781-799.
- Forde, Daryll and Mary Douglas
 1967 "Primitive Economies" in Tribal and Peasant Economies George Dalton, ed., 13-28. Garden City, NY: Natural History Press.
- Gailey, Christine W. And Thomas C. Patterson
 1988 "Power Relations and State Formation" in Power Relations and State Formation, Patterson and Gailey, eds., 1-26. Salem, WI: Sheffield Publishing Company.
- Galloway, Patricia, ed.
 1989 The Southeastern Ceremonial Complex: Artifacts and Analysis. Lincoln and London: University of Nebraska Press.
- Gannon, Michael V.
 1993 The Cross in the Sand: The Early Catholic Church in Florida 1513 – 1870. Gainesville: University Presses of Florida.
- Gibbons, Ann
 1996 "First Americans: Not Mammoth Hunters, But Forest Dwellers?" Science, vol. 272:346-7.
- Gifford, John C.
 1944 "Five Plants Essential to the Indians and Early Settlers of Florida" in Tequesta, No. IV:36-44.
- Gilliland, Marion Spjut
 1989a Key Marco's Buried Treasure. Ripley P. Bullen Monographs in Anthropology and History Number 8, Florida Museum of Natural History. Gainesville: University of Florida Press.
 1989b The Material Culture of Key Marco Florida. Port Salerno: Florida Classics Library, Paperbound edition.
- Goggin, John M. and William Sturtevant
 1964 "The Calusa: A Stratified, Nonagricultural Society (With Notes on Sibling Marriage)" in Explorations in Cultural Anthropology: Essays in Honor of George Peter Murdock, Ward H. Goodenough, ed., 179-219. New York, San Francisco, Toronto and London: McGraw Hill Book Company.

Gore, Robert H.

1992 The Gulf of Mexico. Sarasota:Pineapple Press, Inc.

1995 "Cushing's 'Bird God of War' -- Solving a Key Marco Mystery" in The Florida Anthropologist 48(3):194-199.

Granberry, Julian

1995 "The Position of the Calusa Language in Florida Prehistory: A Working Hypothesis" The Florida Anthropologist, vol. 48, no.3:156-173.

Griffin, James B.

1967 "Eastern North American Archaeology: A Summary" in Science 156(3772):175-191.

Griffin, John W.

1988 The Archeology of Everglades National Park: A Synthesis" Tallahassee: National Park Service, Southern Archeological Center.

1996 Fifty Years of Southeastern Archaeology: Selected Works of John W. Griffin. Gainesville: University Press of Florida.

Grimaldi, David A.

1996 Amber: Window to the Past. New York: Harry N. Abrams, Inc.

Hall, Don Alan

1998 "Coastal-Entry Model Gains Support As Ice-Free Corridor Theory Fades" in Mammoth Trumpet 13(3):4-8 [journal on-line]; available from <http://www.peak.org/csfa/mt13-3.html>; Internet; accessed 4 November 1998.

Hann, John H., ed. and trans.

1991 Missions to the Calusa. Gainesville: University of Florida Press.

1992 "Political Leadership Among the Natives of Spanish Florida." Florida Historical Society, LXXI(2):199-208.

Hansinger, Michael J.

1992 "Skeletal and Dental Analysis of Burials from the Collier Inn Site, Useppa Island" in in Culture and Environment in the Domain of the Calusa, William H. Marquardt, ed. with the assistance of Claudine Payne, 403-409. Gainesville: Monograph Number 1, Institute of Archaeology and Paleoenvironmental Studies, University of Florida.

Hauswirth, W.W., *et al*

1994 "Inter- and intrapopulation studies of ancient humans." Experientia, vol. 50, no. 6:585-591.

Heyerdahl, Thor with Christopher Ralling

1990 Kon-Tiki Man: An Illustrated Biography of Thor Heyerdahl. San Francisco: Chronicle Books.

Highfield, Arnold R.

1997 "Some Observations on the Taino Language" in The Indigenous People of the Caribbean, Samuel M. Wilson, ed., 154-168. Gainesville: University Press of Florida.

Honychurch, Lennox

1997 "Crossroads in the Caribbean: a site of an encounter and exchange in Dominica," in World Archaeology: Culture Contact and Colonialism, vol. 28, no. 3:291-304.

Jackson, Robert, M.D.

1791 A Treatise on the Fevers of Jamaica, with some Observations on the Intermitting Fever of America. London: Published by the author.

Jeffries, Richard W.

1997 "Middle Archaic Bone Pins: Evidence of Mid-Holocene Regional-Scale Social Groups in the Southern Midwest" in American Antiquity 62(3):464-487.

Johnson, Allen W. and Timothy Earle

1987 The Evolution of Human Societies: From Foraging Group to Agrarian State. Stanford: Stanford University Press.

Johnson, Ann F. and Michael G. Barbour

1990 "Dunes and Maritime Forests" in Ecosystems of Florida, Myers and Ewel, eds., 429-480. Orlando: University of Central Florida Press.

Johnson, William Gray

1996 "A Belle Glade Eathwork Typology and Chronology" in The Florida Anthropologist vol. 29, no.4:249-260.

Jones, Siân

1997 The Archaeology of Ethnicity: Constructing Identities in the Past and Present. London and New York: Routledge.

Joseph, Garnette

1997 "Five Hundred Years of Indigenous Resistance" in The Indigenous People of the Caribbean, Samuel M. Wilson, ed., 214-222. Gainesville: University Press of Florida.

Keefer, David K., Susan D. DeFrance, Michael E. Moseley, James B. Satterlee, Amy Day-Lewis

- 1998 "Early Maritime Economy and El Niño Events at Quebrada Tacahuay, Peru" in Science, vol.281, no.5384:1833-5.

Keegan, William F.

- 1989 "Creating the Guanahatabey (Ciboney): The modern genesis of an extinct culture" in Antiquity 63:373-379.

Knight, Vernon James, ed.

- 1996 The Moundville Expeditions of Clarence Bloomfield Moore. Tuscaloosa and London: University of Alabama Press.

Kozuch, Laura

- 1993 Sharks and Shark Products in Prehistoric South Florida. Gainesville: Monograph Number 2, Institute of Archaeology and Paleoenvironmental Studies, University of Florida.

Lambert, Joseph B., Elizabeth Graham, Marvin T. Smith, and James S. Frye

- 1994 "Amber and Jet from Tipu, Belize" in Ancient Mesoamerica 5(1994):55-60.

Lange, Frederick W.

- 1971 "Marine Resources: A Viable Subsistence Alternative for the Prehistoric Lowland Maya" in American Anthropologist vol. 73, no.1:619-639.

Langenheim, Jean H. and Carlos A. Balsler

- 1975 "Botanical Origin of Resin Objects From Aboriginal Costa Rica" in Vínculos 1(2):72-82.

Larson, Clark Spencer, Margaret J. Schoeninger, Dale L. Hutchinson, Katherine F. Russell, and Christopher B. Ruff

- 1990 "Beyond Demographic Collapse: Biological Adaptation and Change in Native Populations of La Florida" in Columbian Consequences Vol. 2: Archaeological and Historical Perspectives on the Spanish Borderlands East, David Hurst Thomas, ed., 409-428. Washington and London: Smithsonian Institution Press.

Lathrap, Donald W.

- 1973 "The Antiquity and Importance of Long-Distance Trade Relationships in the Moist Tropics of Pre-Columbian South America" in World Archaeology 5(2):170-186.

Lazarus, William C.

1958 "A Poverty Point Complex in Florida," in The Florida Anthropologist, vol. 11, no. 2:23-32.

1979 The Buck Burial Mound: A Mound of the Weeden Island Culture. Fort Walton Beach, FL: Temple Mound Museum.

Lien, Paul M., Ripley P. Bullen, and Clarence H. Webb

1974 "A Poverty Point Owl Amulet Found in Florida" in The Florida Anthropologist, vol. 27, no. 4:165-8.

Lightfoot, Kent

1995 "Culture Contact Studies: Redefining the Relationship between Prehistoric and Historic Archaeology." American Antiquity vol. 60, no. 2:199-217.

Livingston, Robert J.

1990 "Inshore Marine Habitats" in Ecosystems of Florida, Myers and Ewel, eds., 549-573. Orlando: University of Central Florida Press.

Longacre, William A.

1995 "Why Did They Invent Pottery Anyway?" in The Emergence of Pottery: Technology and Innovation in Ancient Societies, William K. Barrett and John W. Hoopes, eds., 277-280. Washington and London: Smithsonian Institution Press.

Luer, George M.

1989 "Calusa Canals in Southwestern Florida: Routes of Tribute and Exchange" in The Florida Anthropologist 42(2):89-130.

1998 "The Naples Canal: A Deep Indian Canoe Canal in Southwestern Florida" in The Florida Anthropologist 51(1):25-36.

Lyon, Eugene

1990 "The Enterprise of Florida" in Columbian Consequences Vol. 2: Archaeological and Historical Perspectives on the Spanish Borderlands East, David Hurst Thomas, ed., 281-296. Washington and London: Smithsonian Institution Press.

Maloney, Walter C.

1983 A Sketch of the History of Key West, Florida. Gainesville: University of Florida Press, original edition 1968.

Marquardt, William H.

- 1988 "The Calusa Social Formation in Protohistoric South Florida" in Power Relations and State Formations, Thomas C. Patterson and Christine W. Gailey, eds., 98-116. Salem, WI: Sheffield Publishing Company.
- 1991 "Introduction" in Missions to the Calusa, John H. Hann, ed. and trans., xv-xix. Gainesville: University of Florida Press.
- 1992a "Recent Archaeological and Paleoenvironmental Investigations in Southwest Florida" in Culture and Environment in the Domain of the Calusa, William H. Marquardt, ed. with the assistance of Claudine Payne, 9-57. Gainesville: Monograph Number 1, Institute of Archaeology and Paleoenvironmental Studies, University of Florida.
- 1992b "Shell Artifacts from the Caloosahatchee Area" in Culture and Environment in the Domain of the Calusa, William H. Marquardt, ed. with the assistance of Claudine Payne, 191-228. Gainesville: Monograph Number 1, Institute of Archaeology and Paleoenvironmental Studies, University of Florida.
- 1992c "Calusa Culture and Environment: What Have We Learned?" in Culture and Environment in the Domain of the Calusa, William H. Marquardt, ed. with the assistance of Claudine Payne, 423-436. Gainesville: Monograph Number 1, Institute of Archaeology and Paleoenvironmental Studies, University of Florida.

Marquardt, William H., ed. with the assistance of Claudine Payne

- 1992 Culture and Environment in the Domain of the Calusa. Gainesville: Monograph Number 1, Institute of Archaeology and Paleoenvironmental Studies, University of Florida.

Marrinan, Rochelle A., John F. Scarry, and Rhonda L. Majors

- 1990 "Prelude to deSoto: The Expedition of Pánfilo de Narváez" in Columbian Consequences Vol. 2: Archaeological and Historical Perspectives on the Spanish Borderlands East, David Hurst Thomas, ed., 71-82. Washington and London: Smithsonian Institution Press.

McGoun, William E.

- 1993 Prehistoric Peoples of South Florida. Tuscaloosa: University of Alabama Press.

Milanich, Jerald T.

- 1990 "The European Entrada into La Florida: An Overview" in Columbian Consequences Vol. 2: Archaeological and Historical Perspectives on the Spanish Borderlands East, David Hurst Thomas, ed., 3-29. Washington and London: Smithsonian Institution Press.

- 1994 Archaeology of Precolumbian Florida. Gainesville: University Press of Florida.
- 1995 Florida Indians and the Invasion from Europe. Gainesville: University Press of Florida.
- 1998 Florida Indians from Ancient Times to the Present. Gainesville, Tallahassee, Tampa, Boca Raton, Pensacola, Orlando, Miami, Jacksonville: University Press of Florida.

Milanich, Jerald T. and Charles H. Fairbanks

- 1980 Florida Archaeology. New York and London: Academic Press, Inc.

Milanich, Jerald T. and Susan Milbrath, eds.

- 1989a First Encounters: Spanish Explorations in the Caribbean and the United States, 1492 - 1570. Gainesville, FL: University of Florida Press.
- 1989b "Another World" in First Encounters: Spanish Explorations in the Caribbean and the United States, 1492 - 1570, 1-26. Milanich and Milbrath, eds., Gainesville, FL: University of Florida Press.

Mitchem, Jeffrey M.

- 1990 "Initial Spanish-Indian Contact in West Peninsular Florida: The Archaeological Evidence" in Columbian Consequences Vol. 2: Archaeological and Historical Perspectives on the Spanish Borderlands East, David Hurst Thomas, ed., 49-59. Washington and London: Smithsonian Institution Press.
- 1996 "The Old Okahumpka site (8LA57): Late Prehistoric Iconography and Mississippian Influence in Peninsular Florida" in The Florida Anthropologist vol. 49, no. 4:225-237.

Muller, Jon

- 1989 "The Southern Cult" in The Southeastern Ceremonial Complex: Artifacts and Analysis. Patricia Galloway, ed., 11-26. Lincoln and London: University of Nebraska Press.

Myers, Ronald L. and John J. Ewel, eds.

- 1990 Ecosystems of Florida. Orlando: University of Central Florida Press.

Nash, Manning

- 1967 "The Organization of Economic Life." In Tribal and Peasant Economies George Dalton, ed., 3-11. Garden City, NY: Natural History Press.

Neill, Wilfred T.

- 1955 "The Identity of Florida's 'Spanish Indians'" in The Florida Anthropologist, vol. 8, no. 2:43-57.

- Odum, William E. And Carole C. McIvor
1990 "Mangroves" in Ecosystems of Florida, Myers and Ewel, eds., 517-548. Orlando: University of Central Florida Press.
- Olazagasti, Ignacio
1997 "The Material Culture of the Taino Indians" in The Indigenous People of the Caribbean, Samuel M. Wilson, ed., 131-9. Gainesville: University Press of Florida.
- Oyuela-Caycedo, Augusto
1995 "Rocks versus Clay: The Evolution of Pottery Technology" in The Emergence of Pottery: Technology and Innovation in Ancient Societies William K. Barnett and John W. Hoopes, eds., 133-144. Washington and London: Smithsonian Institution Press.
- Pareja, Fray Francisco, Fray Lorenço Martínez, Fray Pedro Rruiz, Fray Alonso Desquero, Fray Juan de la Cruz, Fray Francisco Moreno de Jesús, Fray Bartolomé Romero
1617 Letter to the King, January 17, 1617, St. Augustine. Archivo General de Indias, Santo Domingo 235 Woodbury Lowery Collection, reel 3, of the Florida State Library copy.
- Parry, J.H.
1990 The Spanish Seaborne Empire. Berkeley and Los Angeles: University of California Press. Original edition, New York: Knopf, 1981.
- Patterson, Thomas C. and Christine W. Gailey, eds.
1988 Power Relations and State Formation. Salem, WI: Sheffield Publishing Company.
- Payne, Claudine and Charles Blanchard
1997 Archaeology and Environment at the Pineland Site Complex. Gainesville: Institute of Archaeology and Paleoenvironmental Studies.
- Peck, Douglas T.
1998 "The Case for Prehistoric Cultural Contact Between the Maya on the Yucatán and the Indians of Florida" in The Florida Anthropologist, vol. 51, no. 1:3-14.
- Petrides, George A.
1988 A Field Guide to Eastern Trees. Boston and New York: Houghton Mifflin Company.
- Phelan, John Leddy
1970 The Millennial Kingdom of the Franciscans in the New World. 2d ed. rev., Berkeley and Los Angeles: University of California Press.

Polanyi, Karl

- 1965 "The Economy as Instituted Process" in Trade and Market in the Early Empires Trade and Market in the Early Empires: Economics in History and Theory, Karl Polanyi, Conrad M. Arensberg and Harry W. Pearson, eds., 243-270. New York: The Free Press.

Polanyi, Karl, Conrad M. Arensberg, and Harry M. Pearson, eds.

- 1965 Trade and Market in the Early Empires: Economics in History and Theory. New York: the Free Press. London: Collier-Macmillan Limited.

Pringle, Heather

- 1998 "Traces of Ancient Mariners Found in Peru" in Science, vol. 281, no.5384:1775-6.

Purdy, Barbara A.

- 1991 The Art and Archaeology of Florida's Wetlands. Boca Raton: CRC Press.
- 1992 "Florida's Archaeological Wet Sites" in The Wetland Revolution, Bryony Coles, ed., 113-123. The Prehistoric Society and WARP (Wetland Archaeology Research Project). Exeter, UK: Short Run Press, Ltd.
- 1996a How To Do Archaeology The Right Way. Gainesville: University Press of Florida.
- 1996b Indian Art of Ancient Florida. Hong Kong: C&C Offset Printing Company, Ltd.

Randazzo, Anthony F. and Douglas S. Jones, eds.

- 1997 The Geology of Florida. Gainesville: University Press of Florida.

Ramenofsky, Ann F.

- 1990 "Loss of Innocence: Explanations of Differential Persistence in the Sixteenth Century Southeast" in Columbian Consequences Vol. 2: Archaeological and Historical Perspectives on the Spanish Borderlands East, David Hurst Thomas, ed., 31-48. Washington and London: Smithsonian Institution Press.

Record, Samuel J. And Robert W. Hess

- 1943 Timbers of the New World. Salem, NH: Ayer Company, Publishers, Inc.

Reilly, Stephen Edward

- 1981 "A Marriage of Expedience: The Calusa Indians and their Relations with Pedro Menéndez De Avilés in Southwest Florida, 1566-1569" in The Florida Historical Quarterly, vol. LIX, no. 4:395-421.

- Rice, Patty C.
 1980 Amber, The Golden Gem of the Ages. New York: Van Nostrand Reinhold Company.
- Rogozński, Jan
 1994 A Brief History of the Caribbean: From Arawak and the Carib to the Present. New York: Meridian.
- Roosevelt, A.C.
 1995 "Early Pottery in the Amazon: Twenty Years of Scholarly Obscurity" in The Emergence of Pottery: Technology and Innovation in Ancient Societies William K. Barnett and John W. Hoopes, eds., 115-132. Washington and London: Smithsonian Institution Press.
- Roosevelt, A.C., M. Lima da Costa, C. Lopes Machado, M. Michab, N. Mercier, H. Valladas, J. Feathers, W. Barnett, M. Imazio da Silveira, A. Henderson, J. Silva, B. Chernoff, D.S. Reese, J.A. Holman, N. Toth, K. Schick
 1996 "Paleoindian Cave Dwellers in the Amazon: The Peopling of the Americas" in Science, vol. 272:373-384.
- Roth, Walter Edmund
 1924 "An Introductory Study of the Arts, Crafts, and Customs of the Guiana Indians," in 38th Annual Report of the Bureau of American Ethnology, 1916-1917:25-745.
- Rouse, Irving
 1939 "Prehistory in Haiti: A Study in Method." New Haven: Yale University Publications in Anthropology no.21.
 1951 "A Survey of Indian River Archeology, Florida." New Haven: Yale University Publications in Anthropology no.44.
 1992 The Tainos: Rise and Decline of the People Who Greeted Columbus. New Haven and London: Yale University Press.
- Russo, Michael Anthony
 1991 "Archaic Sedentism On The Florida Coast: A Case Study From Horr's Island." Ph.D. diss., University of Florida.
- Sahlins, Marshall
 1974 Stone Age Economics. London: Tavistock Publications Limited, original edition 1972.
 1992 Anahulu: The Anthropology of History in the Kingdom of Hawaii, Volume One: Historical Ethnography. Chicago and London: University of Chicago Press.

- Sandweiss, Daniel H., Heather McInnis, Richard L. Burger, Asunción Cano, Bernaredino Ojeda, Rolando Paredes, María del Carmen Sandweiss, and Micheal D. Glascock
 1998 "Quebrada Jaquay: Early South American Maritime Adaptations" in Science, vol. 281, no.5384:1730-3.
- Scarry, C. Margaret and Elizabeth J. Reitz
 1990 "Herbs, Fish, Scum, and Vermin: Subsistence Strategies in Sixteenth Century Spanish Florida" in Columbian Consequences Vol. 2: Archaeological and Historical Perspectives on the Spanish Borderlands East, David Hurst Thomas, ed., 343-354. Washington and London: Smithsonian Institution Press.
- Sears, William H.
 1958 "Burial Mounds on the Gulf Coastal Plain." American Antiquity XXIII (3):274-284.
- 1977 "Seaborne Contacts between Early Cultures in Lower Southeastern United States and Middle through South America" in The Sea In The Pre-Columbian World, Elizabeth P. Benson, ed., 1-15. Dumbarton Oaks Research Library and Collections. Washington D.C.: Trustees for Harvard University.
- Shaffer, Lynda Norene
 1992 Native Americans Before 1492: The Moundbuilding Centers of the Eastern Woodlands. Armonk, NY: M.E. Sharpe, Inc.
- Small, James F.
 1966 "Additional Information on Poverty Point baked clay objects," The Florida Anthropologist vol. 19, nos. 2-3 in "A Poverty Point Owl Amulet Found in Florida," in The Florida Anthropologist by Paul M. Lien et al. vol. 27, no.4:165-8. 1974.
- Smith, Marvin T.
 1987 Archaeology of Aboriginal Culture Change in the Interior Southeast: Depopulation During the Early Historic Period. Gainesville: University Presses of Florida.
- 1989 "Indian Responses to European Contact: The Coosa Example" in First Encounters: Spanish Explorations in the Caribbean and the United States, 1492 - 1570, Milanich and Milbrath, eds., 135-149. Gainesville, FL: University of Florida Press.
- Snapp, Annette L.
 1994 "A Brief History of the Durnford Collection of Key Marco, Florida" M.St. Long Essay, University of Oxford.

Snapp, Annette L. And James Sickman

- 1996 "Archaeological Reconnaissance Survey of Fisherman's Point, 8LL1886, at Fisherman's Key, Lee County, Florida,"

Steward, Julian

- 1942 "The Direct Historical Approach to Archaeology." American Antiquity, vol.VII., no. 4:337-343.

Sturtevant, William C.

- 1953 "Chakaika and the 'Spanish Indians': Documentary Sources compared with Seminole Traditions" in Tequesta, no. 13:35-73.

- 1960 "The Significance of Ethnological Similarities Between Southeastern North America and the Antilles." New Haven: Yale University Publications in Anthropology no. 64. pp.3-58.

Swanton, John R.

- 1922 "Early History of the Creek Indians and their neighbors." Bulletin 73. Washington D.C.: Bureau of American Ethnology.

- 1968 The Indian Tribes of North America, Bureau of American Ethnology, Bulletin 145. Original edition 1952. Washington D.C.: Smithsonian Institution Press.

- 1970 Early History of the Creek Indians and their neighbors, Bureau of American Ethnology, Bulletin 73. Original edition 1922. New York and London: Johnson Reprint Corporation.

- 1987 The Indians of the Southeastern United States, Bureau of American Ethnology, Bulletin 137. Original edition 1946. Washington D.C. and London: Smithsonian Institution Press.

Thomas, David Hurst, ed.

- 1990 Columbian Consequences: Volume 2, Archeological and Historical Perspectives on the Spanish Borderlands East. Washington and London: Smithsonian Institution Press.

Thompson, J. Eric S.

- 1951 "Canoes and Navigation of the Maya and their Neighbors" in Journal of the Royal Anthropological Institute of Great Britain and Ireland. Vol. LXXIX:69-78.

Tilley, Christopher

- 1994 A Phenomenology of Landscape: Places, Paths and Monuments. Oxford and Providence USA: Berg Publishers.

- Torrence, Corbett McP., Samuel J. Chapman and William H. Marquardt
 1994 "Topographic Mapping and Archaeological Reconnaissance of Mound Key State Archaeological Site (8LL2), Estero Bay, Florida." Report submitted to Koreshan Unity Alliance, Inc. Gainesville: Institute of Archaeology and Paleoenvironmental Studies.
- True, David O.
 1944 "Memoir of D. d'Escalante Fontaneda Respecting Florida" translated by Buckingham Smith(1854), commentary and notes by David O. True, Coral Gables: University of Miami and Historical Society of Southern Florida.
- Tuross, Noreen, Marilyn L. Fogel, Lee Newsom, and Glen H. Doran
 1994 "Subsistence in the Florida Archaic: The Stable-Isotope and Archaeobotanical Evidence from the Windover Site." American Antiquity, 59(2):288-303.
- United States Department of Agriculture, Soil Conservation Service
 1984 Soil Survey of Lee County, Florida. By Warren G. Henderson, Jr. Washington D.C.: GPO.
- United States Department of Agriculture, Soil Conservation Service and Agricultural Experiment Station
 1944 Aerial Photographs DCT-1C-7 and DCT-1C-8 flown 1-31-44. National Cooperative Soil Survey, Lee Soil Conservation District. On file, USDA Service Center, North Fort Myers, Fort Myers, FL.
 1944 Aerial Photographs DCT-3c-67 through DCT-3C-74, flown 4-13-44. National Cooperative Soil Survey, Lee Soil Conservation District. On file, USDA Service Center, North Fort Myers, FL.
 1953 Aerial Photographs DCT-2H-115 and DCT-2H-117 flown 1-26-53, National Cooperative Soil Survey, Lee Soil Conservation District. On file, USDA Service Center, North Fort Myers, FL.
 1958 Aerial Photograph DCT-4V-223 flown 3-15-58, National Cooperative Soil Survey, Lee Soil Conservation District. On file, USDA Service Center, North Fort Myers, FL.
- United States Geological Survey, Department of the Interior
 1958 "Estero, FLA. Quadrangle" 7.5 Minute Series (Topographic-Bathymetric), Photorevised 1987, Bathymetry added 1991.
 1958 "Fort Myers SW FLA Quadrangle" 7.5 Minute Series (Topographic-Bathymetric), Photorevised 1987, Bathymetry added 1991.
 1958 "Fort Myers Beach, FLA Quadrangle" 7.5 Minute Series (Topographic-Bathymetric), Photorevised 1987, Bathymetry added 1991.

- Upchurch, Sam B., Pliny Jewell IV, and Eric DeHaven
 1992 "Stratigraphy of Indian 'Mounds' in the Charlotte Harbor Area, Sea-level Rise and Paleoenvironments" in Culture and Environment in the Domain of the Calusa, William H. Marquardt, ed. with the assistance of Claudine Payne, 59-103. Gainesville: Monograph Number 1, Institute of Archaeology and Paleoenvironmental Studies, University of Florida.
- Van Andel, Tjeerd H.
 1989 "Late Quaternary sea-level changes and archaeology." Antiquity 63: 733-45.
- Varner, John Grier and Jeannette Johnson Varner
 1996a "Preface" in The Florida of the Inca by Garcilaso de la Vega, pp.v-viii. Austin: University of Texas Press.
- 1996b "Introduction" in The Florida of the Inca by Garcilaso de la Vega, pp.xxi-xxxiv. Austin: University of Texas Press.
- Verano, John W. and Douglas H. Ubelaker, eds.
 1992 Disease and Demography in the Americas. Washington and London: Smithsonian Institution Press.
- Walker, Karen J.
 1992a "Bone Artifacts from Josslyn Island, Buck Key Shell Midden, and Cash Mound: A Preliminary Assessment for the Caloosahatchee Area" pp. 229 - 246 in Culture and Environment in the Domain of the Calusa, William H. Marquardt, ed. with the assistance of Claudine Payne. Gainesville: Institute of Archaeology and Paleoenvironmental Studies, Monograph Number 1.
- 1992b "The Zooarchaeology of Charlotte Harbor's Prehistoric Maritime Adaptation: Spatial and Temporal Perspectives" pp.265-366 in Culture and Environment in the Domain of the Calusa, William H. Marquardt, ed. with the assistance of Claudine Payne. Gainesville: Institute of Archaeology and Paleoenvironmental Studies, Monograph Number 1.
- 1995a "Proposal of Pineland Archeological District, Lee County, Florida for Nomination to the National Register of Historic Places, U.S. National Park Service Form 10-900. Fort Myers, FL: Lee County Department of Community Development.
- 1995b "Cover Document for Archaeological Resources of Southwest Florida's Caloosahatchee Region, Lee and Charlotte Counties, 11500 B.C. - A.D. 1945" for Nomination to the National Register of Historic Places, U.S. National Park Service Form 10-900-a. On file, Lee County Department of Community Development, Ft. Myers, FL.

- Weber, David J.
 1992 The Spanish Frontier in North America. New Haven and London: Yale University Press.
- Wedderburn, Leslie A., Michael S. Knapp, Daniel P. Waltz, and Wm. Scott Burns
 1982 "Hydrogeologic Reconnaissance of Lee County, Florida Part I-Text," Technical Publication 82-1, South Florida Water Management District.
- Wheeler, Ryan J.
 1995 "The Ortona Canals: Aboriginal Canal Hydraulics and Engineering" in The Florida Anthropologist 48(4):265-282.
 1996a "Ancient Art of the Florida Peninsula: 500 B.C. to A.D.1763." Ph.D. diss., University of Florida.
 1996b "Metal Crested Woodpeckers: Artifacts of the Terminal Glades Complex" in The Florida Anthropologist 50(2):67-81.
 1998 "Aboriginal Canoe Canals of Cape Sable" in The Florida Anthropologist 51(1):15-24.
- Wheeler, Ryan J. and Wesley F. Coleman
 1996 "Ornamental Bone Carving of Southern Florida: Some Late Styles and their Associations" in The Florida Anthropologist 49(2):49-63).
- Whitehead, Neil L.
 1988 Lords of the Tiger Spirit: A History of the Caribs in Colonial Venezuela and Guyana 1498-1820. Dordrecht, Holland and Providence, USA: Foris Publications.
- Whitley, David S. and Ronald I. Dorn
 1993 "New Perspectives on the Clovis vs. Pre-Clovis Controversy." American Antiquity, 58(4):626-647.
- Widmer, Randolph J.
 1988 The Evolution of the Calusa: A Nonagricultural Chiefdom on the Southwest Florida Coast, Tuscaloosa and London: University of Alabama Press.
 1989 "The Relationship of Ceremonial Artifacts from South Florida with the Southeastern Ceremonial Complex" in The Southeastern Ceremonial Complex: Artifacts and Analysis, Patricia Galloway, ed., 166-180. Lincoln and London: University of Nebraska Press.
 1996 "Recent Excavations at the Key Marco Site, 8CR48, Collier County, Florida" in The Florida Anthropologist 49(1):10-25.

Wilbert, Johannes

1977 "Navigators of the Winter Sun" in The Sea In The Pre-Columbian World, Elizabeth P. Benson, ed., 17-46. Dumbarton Oaks Research Library and Collections. Washington D.C.: Trustees for Harvard University.

Williams, Mary Beth and Jeffrey Bendremer

1997 "The Archaeology of Maize, Pots, and Seashells: Gender Dynamics in Late Woodland and Contact-Period New England" in Women In Prehistory: North America and Mesoamerica, Cheryl Claassen and Rosemary A. Joyce, eds., 136-149. Philadelphia: University of Pennsylvania Press.

Wilson, Samuel M., ed.

1997 The Indigenous People of the Caribbean. Gainesville: University Press of Florida.

Wing, Elizabeth S.

1977 "Factors Influencing Exploitation of Marine Resources." In The Sea In The Pre-Columbian World, Elizabeth P. Benson, ed., 47-64. Dumbarton Oaks Research Library and Collections. Washington D.C.: Trustees for Harvard University.

SUBSIDIARY BIBLIOGRAPHY

Allerton, David, George M. Luer, and Robert S. Carr

- 1984 "Ceremonial Tablets and Related Objects from Florida" in The Florida Anthropologist 37:5-54.

Brain, Jeffrey P., Alan Toth, and Antonio Rodriguez-Buckingham

- 1974 "Ethnohistoric Archaeology and the DeSoto Entrada into the Lower Mississippi Valley" in The Conference on Historic Site Archaeology Papers, vol.7, pp.232-289.

Bushnell, Amy Turner

- 1981 The King's Coffer: Proprietors of the Spanish Florida Treasury, 1565-1702. Gainesville: University Presses of Florida.

Crosby, Alfred W., Jr.

- 1972 The Columbian Exchange: Biological and Cultural Consequences of 1492. Westport, CT: Greenwood Press.

Davis, R.A.

- 1994 "Barriers of the Florida Gulf Peninsula" in Geology of Holocene Island Systems, edited by R.A. Davis, 167-206. Heidelberg:Springer-Verlag.

Davis, T. Frederick

- 1935 "Juan Ponce de Leon's Voyages to Florida" in Florida Historical Quarterly 14:5-70.

Evans, Clifford

- 1964 "Lowland South America" in Prehistoric Man in the New World, Jesse D. Jennings and Edward Norbeck, eds., 419-50. Chicago: University of Chicago Press.

Fenneman, Neviro M.

- n.d. "Physical Areas of the United States" in cooperation with the Physiographic Committee of the Geological Survey.

Ferguson, L.

- 1992 Uncommon Ground: Archaeology and Early African America, 1650-1800. Washington, D.C.: Smithsonian Institution Press.

Griffin, John W.

- 1988 The Archeology of Everglades National Park: A Synthesis. Tallahassee: National Park Service, Southeastern Archeological Center.

Heizer, R.

- 1991 "The Direct-Historical Approach in California Archaeology" in American Antiquity 7:98-122.

- Helms, Mary W.
 1988 Ulysses' Sail: An Ethnographic Odyssey of Power, Knowledge, and Geographical Distance. Princeton: Princeton University Press.
- Hemming, John
 1978 Red Gold: The Conquest of the Brazilian Indians. Cambridge: Harvard University Press.
- Henshaw, Henry W.
 1883 "Animal Carvings from Mounds of the Mississippi Valley" in Second Annual Report of the Bureau of American Ethnology, 1880-1881, 117-166.
- Johnson, A. and T. Earle
 1987 The Evolution of Human Societies: From Foraging Group to Agrarian State. Stanford: Stanford University Press.
- Laudonnière, René de
 1975 Three Voyages. Charles E. Bennett, ed and trans. Gainesville: University Presses of Florida.
- MacDonald, George F. and Barbara A. Purdy
 1982 "Florida's Wet Sites: Where the Fragile Past Survives" in Early Man 4:6-12.
- McGoun, William E.
 1981 "Medals of Conquest in Calusa Florida," M.A. thesis, Florida Atlantic University.
- Meggers, Betty J., Clifford Evans, and Emilio Estrada
 1965 "Early Formative Period of coastal Ecuador: The Valdivia and Machalilla Phases" in Smithsonian Contributions to Anthropology. Vol. 1 Washington, D.C.: United States National Museum
- Merrill, W.L.
 1994 "Cultural Creativity and Raiding Bands in Eighteenth-Century Northern New Spain" in Violence, Resistance, and Survival in the Americas, W. Taylor and F. Pease G.Y., eds., 124-152. Washington D.C.: Smithsonian Institution Press.
- Paabo, S.
 1985 "Molecular cloning of ancient Egyptian mummy DNA" in Nature 312:644-645.
 1989 "Ancient DNA: extraction, characterization, molecular cloning, and enzymatic amplification" in Proceedings of the National Academy of Sciences, U.S.A. 86: 6196-6200.

- Paabo, S., Gifford, J.A., and Wilson, A.C.
 1989 "Ancient DNA and the polymerase chain reaction. The emerging field of molecular archaeology" in Journal of Biological Chemistry 264:9797-9712[sic].
- Paabo, S., Dew, K., Frazier, B.S., and Ward, R.H.
 1990 "Mitochondrial revolution and the peopling of the Americas" in American Journal of Physical Anthropology 81:277.
- Phillips, G.H.
 1981 The Enduring Struggle: Indians in California History. San Francisco: Boyd and Fraser Publishing.
- Rogan, P.K., and Salvo, J.J.
 1990 "Molecular genetics and pre-Colombian [sic] South American Mummies" in Molecular Evolution, UCLA Symposium on Molecular Cellular Biology 122:223-234.
- Salvo, J.J., Allison, M.J., and Rogan, P.K.
 1989 "Molecular genetics of pre-Columbian South American mummies" in American Journal of Physical Anthropology 78:295.
- Service, E.R.
 1962 Primitive Social Organization: An Evolutionary Perspective. New York: Random House.
- Shanks, M. and C. Tilley
 1987 Social Theory and Archaeology. Oxford: Polity Press.
- Weisman, Brent R.
 1990 National Register of Historic Places Registration Form: Big Mound Key/Bogges Ridge Archaeological District. Tallahassee: Florida Division of Historical Resources, Bureau of Archaeological Research.
- Widmer, Randolph J.
 1989 "The Relationship of Ceremonial Artifacts from South Florida with the Southeastern Ceremonial Complex" in The Southeastern Ceremonial Complex: Artifacts and Analysis: The Cottonlandia Conference, Patricia Galloway, ed.: 166-180. Lincoln: University of Nebraska Press.
- Willey, Gordon R.
 1949 Excavations in Southeast Florida. Yale University Publications in Anthropology, No.42. New Haven: Yale University Press.
- Williams, Wilma B. and Bert Mowers
 1979 "Bishop's Hammock, Broward County, Florida" in The Florida Anthropologist 32:17-31.

Zubillaga, Felix, ed.

1946 Monumenta Antiquae Floridae (1566-1572). Rome: Monumenta Historica
Societatis Iesu 69; Monumenta Missionum Societatis Iesu 3.

