THEY ARE RICH ONLY BY THE SEA: TESTING A MODEL TO INVESTIGATE CALUSA SALVAGE OF 16TH- AND EARLY-17TH-CENTURY SPANISH SHIPWRECKS

by

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ABSTRACT

THEY ARE RICH ONLY BY THE SEA: TESTING A MODEL TO INVESTIGATE CALUSA SALVAGE OF 16TH- AND EARLY-17TH-CENTURY SPANISH SHIPWRECKS

Kelsey Marie McGuire

Archaeologists in South Florida have uncovered Spanish items from 16th- and early-17th-century Calusa sites. Certainly, many of these are the material remains of official trade networks between Spaniards and indigenous peoples, but archaeological evidence suggests that the Calusa also acquired Spanish goods by salvaging shipwrecks. Colonial documents likewise indicate that shipwreck salvage was prevalent along the Florida coast. This project examines historical and archaeological evidence in conjunction with an original model in order to examine the influence of the Spanish maritime activity on an indigenous population in colonial-era Florida.
CHAPTER I.
INTRODUCTION

In coastal areas of the southeastern United States, archaeologists have uncovered numerous examples of Spanish colonial artifacts from contexts associated with indigenous occupation. Certainly, many of these items can be linked to the early-contact trade networks between Spaniards and indigenes. During the 16th century, the development of colonial infrastructure introduced trade networks of unprecedented volume and geographical range to Florida. While these networks delivered Spanish-origin items to indigenous communities, there is evidence to suggest that native Floridians acquired Spanish goods through means other than trade. In particular, archaeological excavations in southwestern Florida have recovered non-trade items of Spanish origin from Calusa sites, such as Mound Key near Fort Meyers Beach and Ortona near Lake Okeechobee.

When the Spaniards first arrived in Florida in 1513, the Calusa chiefdom likely claimed sociopolitical hegemony over most of southern Florida. The Calusa capital, later named Carlos by the Spanish, was probably in the vicinity of modern-day Mound Key. It was from this location that the principle chief controlled smaller settlements between Charlotte Harbor and Ten Thousand Islands. He ruled a sedentary, tribute-based chiefdom of scattered vassal communities (Marquardt 1986:63). The communities relied on estuarine resources for subsistence rather than agricultural subsistence, as had most other Florida chiefdoms in response to Mississippian influences (Reilly 1981:396; Thompson and Worth 2011:78). It seems as though the Calusa were isolationists on multiple fronts. They maintained political and religious distance from Spanish emissaries, missionaries, and soldiers between the 16th and 18th centuries and were fiercely
opposed to making peace with their Tocobaga enemies to the north. In spite of their isolationist policies, the Calusa possessed caches of Spanish-origin items, some of which did not belong to the standard Spanish trade assemblage.

Archaeology in southwestern Florida has demonstrated that the Calusa practiced marine resource exploitation for a millennium prior to the first Spanish contact in 1513 (Luer 1989:116-121; Widmer 1988:223, 279-280; Marquardt and Walker 2008). Items recovered from 16th- and 17th-century sites suggest that the Calusa began to incorporate shipwreck salvage into an existing estuarine exploitation strategy. Excavations near modern-day Fort Myers Beach, for example, have yielded pre-contact style plummets, adzes, bone carvings, beads, and ceramics in mixed-context with brass hardware and keys, silver rosary crosses, iron nails, large and small metal disks, sheet copper, cut crystal pendants, gold beads, ballast stones, and possible thimbles of Spanish or South American origin (Wheeler 2000:32-62). The presence of these items is not conclusive evidence of shipwreck salvage, but it is possible that many non-trade items entered Calusa contexts via salvage behavior.

During the 16th and 17th centuries, Florida was an important landmark for ships destined for Spain. These Spanish ships carried valuable export cargo, and their routes were precise, taking fleets from the Caribbean to the Atlantic by way of the Straits of Florida and around the eastern tip of Florida (Sluiter 1985; Escalante de Mendoza 1985). If pilots maintained the proper courses, there was no reason for ships to approach Calusa territory on the west coast. With no direct access to shipping routes, the Calusa lacked the opportunity to salvage wrecked vessels on the west coast. Instead, as the 16th-century memoir of a Spanish shipwreck survivor reported, the Calusa chief sent salvage parties the east coast of Florida to investigate shipwrecks. He claimed they returned “with great wealth, in bars of silver and gold, and sacks of reales, and much
clothing” (Worth 2014:206). In a 1566 visit to the Calusa capitol, Spanish soldiers noticed that the Indians possessed a great deal of gold and silver in the form of coins and bars. The soldiers suspected that these precious metals had come from wrecks, and they bartered in order to retrieve them from Calusa possession (Worth 2014:247).

Other European accounts also indicate that indigenous Floridians sought out shipwrecks in order to procure Spanish goods. A 17th-century Carmelite missionary, Fray Andrés de San Miguel (2001:80-81), recalled an encounter with indigenous Floridians who had attacked the crewmembers of a foundered vessel and plundered the cargo and ship fittings. The group approached the friar with “sets of ships’ nails and some pieces of sail to barter.” Northeast of Calusa territory, French explorer René Laudonnière encountered two Spaniards who had wrecked fifteen years earlier. They told the Frenchmen that Calusa Indians discovered their foundered ship, rescued many survivors, and salvaged the “mineral wealth” of the ship. The Calusa king then used the minerals to fashion gold plates for dancing rituals, to fill his coffers, and to redistribute the riches to inland kingdoms (Bennett 2001:110-111). The Spanish explorer Pánfilo de Narváez purported that one village in the Tampa Bay vicinity possessed “many boxes of merchandise from Sevilla” (Allender 1995:90). These European accounts demonstrate a phenomenon whereby shipwrecked goods became a part of indigenous practices in Florida.

From shipwreck memoirs to missionary narratives, a colonial European perspective pervades our understanding of the Calusa. Although the ethnohistorical perspective is Eurocentric and antiquated, these qualities should not bar textual data from being a valid part of analysis. Rather, as with this thesis, colonial documents are integral to understanding early Spanish-indigenous relations. Analyses of Spanish trade lists and ship registries provided this research with detailed information not available from archaeology alone. Trade lists disclosed
the nature of the face-to-face, materialistic encounters, which were sanctioned by the Spanish government. Ship registries are virtual inventories of the material that would have been available to salvagers on wreck sites. They reveal the subtle—yet pertinent—details of “non-contact” encounters. This project does not approach historical data as supplemental to the archaeology but, rather, equal in terms of their informative value.

Scholars have investigated Calusa sites since the 1880s, and modern archaeologists are continuing to reveal more about the complex chiefdom through survey, mitigation, and full-scale excavations (Wheeler 2000:1-2; Torrence et al. 1994; Marquardt 1992b and 2013). This research depicts culture contact between the Spanish Empire and the Calusa chiefdom by synthesizing data from all manner of collection methods and locations. The archaeological component of this thesis examines salvaged items from sites in the Calusa region, including Mound Key, Pineland, and Ortona. This particular sample of artifacts provides a basis for testing a model of Calusa salvage culture.

If salvage culture indeed persisted within the Calusa heartland, how were the behaviors manifested? Escalante Fontaneda (1575:f.7r) alleges that the Calusa were “rich only by the sea.” In other words, their salvage activities on the east coast supplied the totality of mineral wealth to the west-coast communities. The model designed for this thesis neither confirms nor refutes Fontaneda’s claim. Instead, the model examines the processes by which the Calusa exploited shipwrecks on the east coast, brought the spoils to the west coast, and then incorporated them into an existing culture of manufacture and consumption. The model amplifies the visibility of such behaviors, and, in addition, elaborates on the colonial relationship between the Calusa and the Spanish.
Formal contact between the Spanish and the Calusa was intermittent throughout the 16th and early-17th centuries, but the Calusa maintained a relationship with Spanish materials through shipwreck salvage. This relationship manufactured a unique culture contact, which highlighted Calusa agency though the appropriation of Spanish goods. This study capitalizes on temporal and geographical parameters, using the isolation of the Calusa on the west coast to narrow in on a unique process of marine exploitation and material appropriation. In a broad sense, the study examines the way in which the disaster of one group became the opportunity of another.
CHAPTER II.
HISTORY

In the summer of 1513 the first recorded European voyagers rounded the southern tip of Florida. Juan Ponce de León’s expedition made landfall on the eastern and western sides of the peninsula and remained long enough to engage in a few skirmishes with native inhabitants. Eight years later, he retraced the Gulf Coast northward from the Florida Keys. As his two-vessel fleet neared the mangrove swamps of Charlotte Harbor, an indigenous party paddled a fleet of canoes out to meet them. No doubt, the indigenes were curious about the approaching ships, but they made it obvious that curiosity was the extent of their attraction. It was evident that the Spaniards had not stumbled upon a small swamp village as an offensive of eighty canoes and a greater number of warriors appeared (Worth 2014:52). The ships anchored in the nearby harbor for three weeks, but tensions did not thaw. Ponce de León returned to the Caribbean with much to report of his discoveries but little to say of his diplomatic relations in South Florida.

As the Spanish learned through subsequent visits, this swamp town was the capitol of a greater province belonging to a people whom we now know as the Calusa. Contact between the Spanish and the Calusa was intermittent and tense for the remainder of the sixteenth century. These interactions, known though historical accounts, characterize the Calusa as a network of village alliances throughout southwest Florida. Although this thesis depends on historical evidence, its primary objective is to use archaeology to explore unrecorded dimensions of Spanish-Calusa interaction. This chapter examines the Calusa as they existed prior to European contact and during colonization as the Spanish expanded their New World enterprise into la Florida. The intersection of the two systems is where this particular thesis builds archaeological
momentum, but a historical groundwork is necessary to enhance the archaeologist’s ability to make informed interpretations and conclusions.

Prehistory of the Calusa

Archaeological evidence informs our basic knowledge of Calusa prehistory. Interest in the Calusa has prompted both amateur and professional archaeology on coastal sites in southwest Florida since the late 19th century. Ethnographic and historical research also contributes to our understanding of the Calusa as a Caloosahatchee chiefdom with political and ethnic hegemony in southwest Florida (Goggin and Sturtevant 1964; R. Bullen 1965; Widmer 1988). After years of detailed investigations and tedious debate, archaeologists devised a precise framework for discussing the temporal, spatial, and cultural distribution of the people of pre-Columbian South Florida. Originally, the “Glades Area Chronology” classified all South Florida Cultures under an umbrella term on the basis of ceramic evaluation (Goggin 1949). In the 1980s, archaeologists started to identify discrete patterns in settlement, material culture, and site type (Carr and Beriault 1984; Widmer 1988). It is through their work that contemporary archaeologists recognize the Calusa not as a Glades-strain of cultural homogeneity but as a distinct group with its own regional chronology (Table 1). Most southeastern archaeologists now agree that the Calusa formed the core of the Caloosahatchee culture area, which extended along Florida’s Gulf coast from Charlotte Harbor to Cape Sable (Wheeler 2000:9).

The Caloosahatchee chronology identifies a spatial and temporal region based on the cultural characteristics of its inhabitants. At its basic function, the classification scheme accounts for temporal and regional idiosyncrasies in the material record of Southwest Florida and allows archaeologists to identify sites using these idiosyncrasies. The Calusa culture area appeared to
border the Tocobaga and Mayaimi polities to the north and east, respectively, and the Gulf of Mexico to the south and west (Widmer 1988:5). While some believe the date to be too early, Widmer (1988:273) suggests that their chiefdom emerged as a polity around A.D. 800.

**TABLE 1**

GLADES AND CALOOSAHATCHEE CHRONOLOGIES WITH DIAGNOSTIC CERAMIC TYPES

<table>
<thead>
<tr>
<th>Glades Chronology</th>
<th>Caloosahatchee Chronology</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>I Early</td>
<td>A.D. 1-500</td>
</tr>
<tr>
<td></td>
<td>Plain ware</td>
</tr>
<tr>
<td>I Late</td>
<td>A.D. 500-700</td>
</tr>
<tr>
<td></td>
<td>Plain and incised open bowls</td>
</tr>
<tr>
<td>IIa</td>
<td>A.D. 700-900</td>
</tr>
<tr>
<td></td>
<td>Incised open bowls</td>
</tr>
<tr>
<td>IIb</td>
<td>A.D. 900-1100</td>
</tr>
<tr>
<td></td>
<td>Incised open and incurving bowls</td>
</tr>
<tr>
<td>IIc</td>
<td>A.D. 1100-1200</td>
</tr>
<tr>
<td></td>
<td>Few decorative elements other than pinching</td>
</tr>
<tr>
<td>IIIa</td>
<td>A.D. 1200-1400</td>
</tr>
<tr>
<td></td>
<td>Incised vessels, extralocal trade ware</td>
</tr>
<tr>
<td>IIIb</td>
<td>A.D. 1400-1513</td>
</tr>
<tr>
<td></td>
<td>Carinated bowls, tooled lips</td>
</tr>
<tr>
<td>IIIc</td>
<td>A.D. 1513-1763</td>
</tr>
<tr>
<td></td>
<td>European olive jar</td>
</tr>
<tr>
<td>I</td>
<td>500 B.C.-A.D. 500</td>
</tr>
<tr>
<td></td>
<td>Sand tempered plain bowls</td>
</tr>
<tr>
<td>II</td>
<td>A.D. 500-1200</td>
</tr>
<tr>
<td></td>
<td>Undecorated sand-tempered plain, Belle Glade Plain</td>
</tr>
<tr>
<td>III</td>
<td>A.D. 1200-1400</td>
</tr>
<tr>
<td></td>
<td>Extralocal trade ware, St. John’s check-stamped</td>
</tr>
<tr>
<td>IV</td>
<td>A.D. 1400-1513</td>
</tr>
<tr>
<td></td>
<td>Pinellas Plain ware, trade ware</td>
</tr>
<tr>
<td>V</td>
<td>A.D. 1513-1750</td>
</tr>
<tr>
<td></td>
<td>European ceramic</td>
</tr>
</tbody>
</table>

Archaeologists characterize the Glades Period as a 2,500-year episode during which South Florida natives adapted to a changing coastal environment. Among the most significant of these adaptations were the introduction of decorated sand-tempered ceramics, the advent of villages, and the carryover of specific bone and shell tool technologies that had emerged during the Archaic Period (Milanich and Fairbanks 1980). Studies in palynology, geomorphology, and
climatology indicate that these adaptations were part of a long-term shift in coastal lifeways. In Florida sea levels had fluctuated drastically since the Paleo-Indian Period (11500-6500 B.C.), but around 4,000 B.C., sea levels reached a stable high point, resulting in a slimming of the peninsula, the formation of swamplands and river systems where dry meadows had been previously, and an increase in aquatic resources (Marquardt 1992b:426).

It would be an overstatement to refer to Glades Culture simply as a behavioral reaction to rapid environmental changes. Yet Florida’s dynamic ecology did influence the development of South Florida’s aboriginal cultures. As Florida’s aquatic habitats swelled during the Archaic period, coastal dwellers became increasingly reliant on marine and estuarine subsistence (Widmer 1988:83-85). Indeed, aquatic subsistence became so integral to Late Archaic coastal life that some groups relinquished the stability of a hunter-and-gatherer strategy and settled in sedentary fishing camps before sea levels stabilized. This shift might have occurred as early as 4,000 B.C. (Marquardt 1992b:426-428). The Caloosahatchee Period, which began at 500 B.C., marked an intensified orientation toward coastal resources, and it was this episode that saw the birth of the Calusa polity. In particular, Widmer (1988:263-267) believes expansion in isolated Glades fishing communities along Florida’s west coast may have led directly to the formation of the chiefdom.

Natural and anthropogenic forces have destroyed the context of many early Calusa sites, so it is difficult to determine when and how the Calusa emerged distinct from neighboring cultures, though many theories exist. Perhaps, as Widmer suggests, Caloosahatchee culture was a vestige of Florida’s initial settlement 13,000 years ago. He argues that the remnant group reached a critical carrying capacity in the Caloosahatchee region circa A.D. 800. Resource shortages led to an organic sociopolitical shift from egalitarianism to complex stratification (Widmer
1988:223). Widmer’s model emphasizes a long-term continuity of cultural traits in the Caloosahatchee Area, whereas other authorities cite the spread of trade routes and linguistic patterns as evidence of a later migration to the region. Julian Granberry (2011) suggests that the proto-Calusa culture migrated to the region with Tunica speakers from the lower Mississippi Valley between 2000 B.C. and 500 B.C.. Other scholars hypothesize that the Calusa belonged to a generic culture area at the time of contact but did not constitute a polity until a Spanish presence spurred disparate settlements to unite politically and militarily (Marquardt in introduction to Hann 1991:xvi). One 16th-century Spanish source claims that Cuban Indians fled their island as the Spanish invaded. The Indians sought refuge in Florida and appealed to the Calusa chief to settle in his territory. He established a refugee village for them within his territory (Escalante Fontaneda 1575:f.3r). This primary account suggests that a stable Calusa chiefdom existed prior to the conquest of Cuba, which occurred in 1511. Regardless of the specifics, the Calusa seemed to have had a vast, organized territory under their control by the time of European contact.

The following discussion does not attempt to refute or to rectify any particular hypothesis regarding the development of Calusa sociopolitics. Rather, it utilizes the best synthesis of archaeological and historical evidence to portray the Calusa as they were at the time of earliest Spanish contact. The underlying assumption of the following discussion is that the Calusa were a people unified in some ethnic and political capacity prior to the arrival of Ponce de León.
“Calusa” as a Political Entity

Archaeological authorities believe Mound Key, Estero Bay to have been the seat of Calusa power during the late 16th century. Contemporary Spaniards called this location Carlos. In the 1570s the Spanish geographer Juan López de Velasco wrote,

There is a little island in the middle [of the Bay of Carlos] that has a circumference of about a half league, with other islets around it. On this [island] Cacique Carlos had his headquarters and presently his successors have it there.

(Velasco in Hann 1991:312)

During the Spanish occupation in South Florida, Europeans referred to the capitol as Carlos, Calos, Caloosa, and Caalus. In reality, the native name for their seat of leadership was far from any such derivation. One Spanish writer claimed, “Carlos in their language signifies a fierce people,” but he never indicated that the Calusa appropriated the name “Carlos” to refer to themselves or their capitol. Various other Spanish accounts allude to Estero Bay by its Indian name, Escampaba (MacMahon and Marquardt 2004:80). Regardless of native antecedents, the name Carlos caught on in European literature and became the synonym for the Calusa province, capitol, and chief.

Pedro Menéndez de Avilés made it a point to establish a garrison at Mound Key following his initial 1566 expedition to Calusa territory. Not only did the Adelantado send Spaniards to live in Carlos, he made a personal appearance in the great hall to marry a Calusa princess. In a flamboyant ceremony, replete with dancing dwarves and 500 singing maidens, Menéndez wed Carlos’s sister as an indication of his commitment to the Spanish-Calusa alliance (Reilly 1981:408). Later that year, Menéndez sent soldiers to build Fort San Antón de Carlos near the house of the Calusa leader, or the “court of the kings.” The following year, Jesuits
established a mission at San Antón. In 1697 Franciscan missionaries set up a church in the same locale (MacMahon and Marquardt 2004:80).

FIGURE 1. Map of Florida showing the extent of Calusa political influence. (Figure by author, 2014.)

One shipwrecked Spaniard, Hernando de Escalante Fontaneda, lived as a captive of the Calusa between 1549 and 1566. In two separate documents, a memoir and a memorandum, he recorded the sociopolitical geography of South Florida. His descriptions recall life in the “province of Carlos” (Escalante Fontaneda 1575). After synthesizing the two documents,
ethnohistorian John Worth determined that Fontaneda knew of at least fifty Carlos villages (Worth 1995:341-342). Fontaneda could identify thirty-eight of those villages by their chiefs’ names. He recalled the locations of these villages being as far north as Charlotte Harbor, as far south as Guarugunbe and Cuchiaga in the Florida Keys, and as far east as Lake Mayaimi (now Lake Okeechobee) (Escalante Fontaneda 1575:f.1r-1v). Of the residents of the interior Mayaimi district, Fontaneda claimed, “They are the subjects of Carlos, and pay him tribute…” (Escalante Fontaneda 1575:f.2v). Some alliances may have been more tenuous than the ones between Carlos and interior communities. European accounts indicate that villages in the Keys vacillated in allegiance to the Calusa and their on-and-off enemies, the Tequesta (A. Bullen 1965:331).

Settlements within the precinct were one of three sizes: a large nucleated village with an area of ten hectares or greater, a nucleated village of three to four hectares, or a fishing hamlet (Widmer 1988:256). The town at Carlos was a quintessential large nucleated village. Prominent mounds, from which Mound Key received its modern name, dominated public areas. During their excavations at the site, John Goggin and William Sturtevant (1964) interpreted the island’s numerous shellworks and earthworks as temple mounds, burials, parallel ridges, and semi-circular ridges. In addition, Goggin and Sturtevant identified remains of aquatic construction projects like watercourts and canals. Villagers used canoes and catamarans, of which there is archaeological and ethnohistoric evidence, to traverse the island (Widmer 1988:250). Using Carlos as an example, one could argue that the Calusa were apt to incorporate the natural estuarine environment into their civic landscape.

Nearly all stratified societies in the American Southeast had to procure crops in order to sustain sedentary populations. A typical southeastern village featured gardens and farmsteads for growing beans, maize, and squash (Scarry and Scarry 2005:262). Directly north of the Calusa,
Mississippian mound builders of the interior Southeast relied on cultivated maize as their foremost dietary staple (Welch 1991:114-115). Unlike contemporaneous subsistence landscapes, the landscape of the Calusa defied archaeologists’ expectations. To date, there is no evidence to suggest that the Calusa practiced plant or animal cultivation (Goggin and Sturtevant 1964; Marquardt 1988; Thompson and Worth 2011). When gifts of maize were available, the Calusa eagerly accepted the food source; but when Spaniards brought hoes to Carlos and instructed the villagers in European farming techniques, the Calusa refused to cultivate their own maize (Hann 2003:32).

Some scholars (Blanton et al. 1996; Worth 2008:10) have suggested that the absence of agriculture prompted chiefdoms to secure inter-regional trade networks for procuring food supplies. This scenario likely transpired in the coastal and interior villages under Calusa control. Primary Spanish accounts relate that villages on the Gulf Coast depended on villages in the Lake Okeechobee Basin to export root starch, and interior villages looked to coastal ones for commodities such as whale jerky (Larson 1980:34). Intra-regional trade did play an important role in the Calusas’ subsistence strategy, and it is feasible that food networks eventually expanded to include other goods.

The town of Carlos rose above the estuaries and inlets on the western edge of the territory. In a geographic sense it was not central; but as the home of the paramount chief, it was the core of Calusa hierarchy. At this site the paramount chief assumed political, economic, and social authority. Worth (2006:3) has estimated that the single chief claimed sovereignty over 10,000-square-miles and 21,000 residents at the time of early contact. If Worth’s spatial and demographic estimates are accurate, the paramount chief controlled one-fifth of the surface area of modern-day Florida.
The paramount Calusa chief was a political potentate, but he divided certain responsibilities among his nobles and advisors. Female family members assisted him in mediating state affairs, and vassal chiefs assisted in the oversight of peripheral villages (Wheeler 2000:16-17). Advisors gathered around the chief’s platform in his home before the sun rose to converse and receive counsel (Rogel in Hann 1991:243). At the highest institutional level, the paramount chief shared religious and military power with a chief priest and a captain general.

Ethnohistoric accounts describe the political alliances among the paramount and vassal chiefs as delicate, hinged on patrilineal succession and strategic intermarriage. Polygamy and sibling marriages were the common means of securing elite lines of succession. In a 1566 letter to the Spanish Crown, Fr. Rogel related one particular relationship between the chief and his political allies after having “begged the cacique” to clarify the details of a feud between himself and his nobles. The explanation involved a formula of family treachery, a four-year-old bride, and murder (Rogel in Hann 1991:267-269). This account, among several others, demonstrates just how fundamental kin-based relationships were to internal politics. Personal insecurities could adversely affect large-scale political alliances (Griffin 1996:193). One bitter relationship had the potential to provoke systemic disapproval of chiefly leadership. For this reason, a primary concern of the paramount chief was to facilitate distribution of resources across his province. The chief’s reputation as a provider, and a fair one at that, increased his legitimacy as a leader and avoided possible tensions among vassal communities.

In order to sustain a resource base for redistribution, the paramount chief maintained a tribute system. His resources originated within and beyond his territorial boundaries. Typical tribute items included food, women, feathers, hides, woven mats, shipwreck spoils, and shipwreck captives (Hann 1992:193; Milanich 1995:49). He selected treasures from among the
more valuable goods to build his private collection, which, at Mound Key, included silver and
gold ornaments, beads, trinkets, and a dais-style bench (Wheeler 2000:16, 142-152). He then
divided the remaining tribute among vassal chiefs. Lesser chiefs repeated the process of caching
and redistributing in their own villages. For commoners, this cycle of redistribution meant
diversity in food and material resources. For the paramount chief, the cycle spelled out absolute
control over the availability of native and non-native goods. In addition, the circulation of
resources reinforced hierarchies, fomented inter-village alliances, and assisted the paramount
chief in resolving disputes between vassals (Widmer 1988:273). As the Calusa were just one of
seven native groups in South Florida, it was important for the paramount chief to maintain
avenues of internal solidarity.

The Calusa Way of Life

The items that archaeologists have used to characterize Caloosahatchee culture are, of
course, those that have survived the last 500 years. Circumstances of poor preservation result in
Caloosahatchee assemblages reflecting non-perishable material culture more frequently than they
reflect the perishable material culture. Additionally, collection bias factored into early excavation
methods, the result being that archaeologists often kept impressive or intact “treasures” and
discarded commonplace artifacts. Fortunately, contemporaneous European documents described
clothing, foods, body art, and plant-based architectural materials whose remains have long-since
deteriorated. Historical and archaeological data are synergetic informants for our current
examination of Calusa behaviors and ideologies.

The traditional pre-contact Calusa artifact assemblage included wood, bone, shell,
ceramic, fiber, and stone items. Through material and design, they specialized a majority of their
functional implements to suit coastal subsistence. The Calusa used a diversity of wood, fiber, and bone to fashion nets, sinkers, hooks, and weirs for fishing activities. In addition to shallow water spearing, they took nets and canoes offshore to fish in deep water. These wooden canoes were as indispensible for deepwater fishermen as they were for transportation and “naval warfare” (Hann 2003:44-45). Responding to the availability of local resources, Caloosahatchee potters predominantly used sand and sponge spicules to temper clay, which they formed into decorated and undecorated vessels of all sizes (Cordell 1992:130). Just as their Archaic predecessors based tool technologies on worked shell, historic-period Calusa depended on shells for tool production. They fashioned various sizes and species of shells into hammers, celts, adzes, dippers, spoons, cups, and gorgets (Marquardt 1992a; Wheeler 2000). In general Calusa tools and functional utensils reflected the lifestyle of an estuarine hunter-gatherer society, which remained cognizant of antecedent Archaic traditions, even as they entered the contact period.

Decorative artistry seems to have been largely consistent in form and design between the 16th and 18th centuries. Artisans fashioned plaques, masks, and amulets using wood, bone, and stone (Hann 2003:46-49). Standardization and longevity of traditional art forms have come to define the “terminal Glades complex,” which Ryan Wheeler (2000:125) describes as artistic-ceremonial expressions of social hierarchies, regional styles, and long-distance exchange networks. The function of much of this artistry was to enrich cultic experiences such as idolatry, religious processions, and burials. Naturalistic representation, especially that of birds, saturated Glades complex symbolism in a manner that resembled Hopewellian imagery (Widmer 1989). In a tradition that extended from the Southeastern United States to the Great Lakes, Hopewellian artists expressed religious semiotics through detailed human and zoomorphic effigies (Wheeler 2000:147; Abrams 2009:185).
The now-extinct assemblage of 11th-century objects from the Key Marco site was a spectacular example of ceremonial complex artistry. Frank Hamilton Cushing began preliminary excavations on the site in the 1890s. Despite his best attempts at preservation, the assemblage’s wooden masks, tablets, and sculptures dried and cracked once Cushing removed them from their muddy context. Many of the artifacts have since disintegrated, but watercolors and written descriptions sufficiently depict the mastery behind Key Marco’s ceremonial objects. Spectacular pelicans, deer, sea turtles, wolves, and alligator figures comprised the majority of the assemblage. Craftsmen used shark tooth implements to carve such effigies out of cypress, pine, and mangrove and finished the wood with a polishing technique and polychrome paint. The lifelike specimens probably served as idols and others as masks (O’Connor 1995:137-140). These wooden artifacts were esoteric and naturalistic, and like most Calusan cultic objects, they were unquestionably different than the human-animal motifs of neighboring Mississippian societies (Widmer 1989:176). Above all, they harkened Hopewell zoomorphic styles and reflected the Calusas’ hunter-gatherer lifestyle in an organic medium.

With the onset of the contact period, Calusa artisans took notice of decorative applications for gold, silver, and copper. It appears that once gold and silver became available, the Calusa incorporated precious metals into the production of political and religious objects regularly. Although there is evidence of copper manufacture on a handful of Mississippian and South Florida pre-contact sites, Spanish presence preceded indigenous use of gold and silver (Wheeler 2000:138). During the contact and post-contact eras, artisans met the demand for tablets, chiefly insignia, and bodily adornments by hammering gold, silver, and copper. The distribution of iconographic metal tablets extended from the coast at Carlos to the interior in Lake Okeechobee Basin. The complex symbolism imbedded in these tablets, coupled with their
geographical distribution, has prompted some scholars to believe that the tablets were dualistic in purpose. This camp suggests that the tablets correlate to the relationship between politics and religion in Calusan society (Hann 2003:33; Luer 1994:182). The most striking detail about Calusan metal tablets is that their artistic sentiment was persistent across the entire Calusa landscape, even after the introduction of Spanish materials and ideologies.

The Calusas’ pre-contact clothing was simple and well adapted to the temperate Florida climate. Fontaneda observed that they “walk in skin,” an allusion perhaps to nakedness or to their use of animal skin. In detail, he describes the female garb as a skirt of moss (“the grass that grows on trees…which seems like wool”) and the male covering as a breechclout “woven of palm” (Escalante Fontaneda 1575:f.1r). A separate Spanish account corroborates that the breechclout was “woven of palm of the width of four fingers and three strands,” forming a “broom which covered only their buttocks” (Hann 2003:221). Commoners continued to wear traditional skins and breechclouts during the contact period, but chiefs obtained specific European garb through trade or shipwreck salvage.

Various ethnohistories describe the ways in which the Calusa used adornments of both European and native origin to highlight social status and to enhance cultic experiences. Carlos’s successor, Felipe, distinguished his status by keeping his hair long and staining his face and body black (Zubillaga in Hann 1991:245). The attractive young wife of Chief Carlos wore nothing but a breechclout and a collar of pearls, precious stones, and gold beads around her neck (Solís de Merás 1964:147). Special occasions called for adornments in addition to simple fiber or leather coverings. For example, dancers performed with “large plates of gold” around their waists (Laudonnière 2001:110).
Faunal and floral remains suggest that the Calusa had a long-standing subsistence regime based on fish and shellfish but that they also supplemented their diet with whale, deer, raccoons, sea turtles, ducks, sharks, wild grasses, roots, and palm fruit (Kozuch 1993:12; Milanich et al. 1984; Scarry 1985). Ethnohistoric accounts corroborate that the Calusa relied on estuarine fish and shellfish as their dominant food source. When Menéndez de Avilés feasted with the chief during his 1566 visit to Carlos, he ate “many kinds of very good fish, roasted and boiled; and oysters, raw, boiled, and roasted, without anything else” (Solís de Merás 1964:148). Access to fish at Carlos was unlimited, because the surrounding lagoons offered year-round fishing grounds. Coastal village life had nutritional drawbacks as well. The salt marshes and swamps surrounding coastal villages equated to limited availability of edible plant species. Furthermore, villagers could exploit those few species only when the species were in season (Larson 1980:29). Indeed, the teeth of five individuals buried at Buck Key around A.D.1200 bear pathology markers related to seasonal food shortages (Hutchinson 1992:418). To combat dietary deficiencies, coastal populations acquired roots, tubers, and fruits through trade with the interior. Residents of the Okechobee interior were reputable for the bread flour they produced from a starchy tuber, which grew year-round only in the Mayaimi region (Larson 1980:31, 200).

Extant examples of Calusa architecture and engineering are few. Today, the remaining Calusa structures are mainly earthworks and shellworks, including mounds, ridges, and canals. Across the Calusa landscape, canals provided the quickest, most reliable means of transport. Some of these dugout waterways intersected at various locations in town centers with several branches leading out to larger bodies of water. Other canals were long-distance and connected coastal sites with the interior (Wheeler 1998:179). On Pine Island Sound, there is evidence that residents designed dams and spillways to account for water flow through their canals even when
the water table was low (Wheeler 1998:179). While canals took advantage of low-lying areas, mounds provided elevated platforms for living spaces and public buildings. Fr. Rogel noted that the mounds at Carlos kept the town’s temples from sinking into the surrounding mangrove swamps (Hann 2003:288). Presently there is no archaeological signature of such temples or any other public or residential structures. The lack of remaining structural material suggests that Calusa buildings decomposed centuries ago.

Gonzalo Solís de Merás reported that the Great House of the chief was a structure with enough room for 2,000 people. The Great House had large windows and chambers, including one where the chief and his wife sat on platforms above those present (Solís de Merás 1964:145-146). The Solís de Merás account reflects nothing of Calusan construction materials. Due to the lack of historical information, it may be conducive to look to other Florida mound-building cultures for a better sense of Calusa architecture. Archaeologists working at the Lake Jackson mound village near modern-day Tallahassee discovered layers of packed clay atop the largest mound. These layers were likely the floors of consecutive structures built on the mound (Willey 1949:95). At a Coles Creek site in the Lower Mississippi Valley, there is evidence that houses adhered to a simple floor plan: thin wooden poles erected in a uniform circle (Haag in Milanich 1985:303). Although Lake Jackson and Coles Creek residents belonged to distinct Mississippian societies, their local resources were comparable to those of the Calusa. Given the environmental circumstances, it is conceivable that Calusa villages consisted of wooden, thatch roof structures.

Calusa objects, ideologies, and politics were unique to native Southeastern culture. Their naturalistic, non-agricultural motifs suggest that their aesthetic culture was similar to that of the Hopewell; yet their tool assemblage drew heavily from Archaic influences, and their sociopolitical interactions were similar to those of large-scale Mississippian societies. Perhaps
their unique qualities were exactly what equipped them to resist Spanish dominance until the 18th century. As this thesis contends, the Calusa were selective in accepting anything with the potential to compromise their way of life or the authority of their chief. Meanwhile, neighboring tribes and chiefdoms willingly exchanged aspects of aboriginal culture for Spanish goods, ideological regimes, and political control (Hann 2003:49).

Spanish Flags in the New World

When Christopher Columbus arrived in Spain in 1485, the Iberian Peninsula was nearly in the hands of the Catholic Monarchs. Granada was the single Islamic city remaining on the peninsula, and the Moors were on the verge of surrendering sovereignty to Castile and Aragon. As the power transfer transpired in 1492, Columbus witnessed the event from the perspective of a Spaniard. The transfer meant that seven bloody centuries of Reconquista had come to a conclusion, and the Catholic Monarchs could now turn their focus to other parts of the world. For Columbus in particular, it meant that there was now a viable way to support his entrepreneurship. The monarchs were not only interested in Atlantic expansion, but they could afford to give him the personnel and funding he required (Nieto Soria 1991:18). In many respects Columbus’s New World discovery was a convergence of fortuitous circumstances. More importantly, it was a mutual recognition that Columbus had aspirations to explore and the Crown had the wherewithal.

Circumstances continued to improve for the Crown as Spanish subjects claimed an increasing amount of fertile land, indigenous populations, mines, and plant and animal supplies in the New World. The Catholic Monarchs understood that the most gainful way to dip in to New World resources was to endorse expeditions in exchange for a cut of the profits. Accordingly, the royal charter became the principal mechanism for Spanish exploration. La Florida owed its
existence to the royal charters, which endorsed every stage of its colonial life, from discovery to the missionization of indigenous populations (Milanich 1999:56).

Though illicit expeditions may have reached the Florida coast previously, a royal charter awarded Juan Ponce de León permission to locate the Island of Beniny in 1512. The former governor of Puerto Rico wanted to invest in “lands to the north” after his succession from office a year prior (Peck 1992:135). Indians rumored that beyond the Bahamas, there was an island of extraordinary wealth. If Ponce de León were to make the discovery, uninhibited access to wealth and prestige would be his reward. He presented a petition to the king to seek new lands and to receive the title of Adelantado for the lands he claimed. In February of 1512, Ponce de León received the conditions of his charter, which allowed him to proceed with preparations for the voyage from his personal coffers and informed him that he had exactly one year to locate Beniny (Worth 2014:74).

Ponce de León was an aristocrat who had spent his professional life in combat against the Moors in Africa and Indians in the Caribbean. He had never trained as a sailor and certainly not as a navigator (Peck 1992:136). An imperative provision of the charter was that he keep a detailed log of the expedition’s latitudes and compass courses. To account for his lack of navigational experience, he hired the professional pilot Antón de Alaminos. Alaminos had sailed with Columbus as a young man and was an expert at dead reckoning. With his pilot, his mistress, and three ships outfitted at his personal expense, Ponce de León set sail from Añasco Bay on March 3, 1513 (Peck 1998).

From San Juan, the fleet took a northwesterly bearing. The ships sailed with the Gulf Stream through the modern-day Bahama Islands, and at Great Abaco Island, they headed west in search of Beniny. When they finally made landfall during Holy Week of 1513, the island he
stumbled upon was larger than anything Ponce de León expected. He declared himself sovereign of the island and named it *La Florida* after the Easter Feast of Flowers. At this point in the voyage, he was probably in Ais Indian territory, near modern-day Cape Canaveral (Milanich 1999:57). The fleet continued south and, reaching Biscayne Bay, came to the main town of the Tequesta Indians. The crew passed through the Florida Keys and, thinking they would soon round the northern coast of this new island, they sailed north and eventually caught sight of the Florida Gulf coast. Near modern-day Ft. Meyers, the crew caught first sight of the Calusa. The ships anchored in a nearby bay for three weeks, during which time Ponce de León traded with Carlos’s emissaries and honed his diplomatic skills, although a series of skirmishes eventually convinced him to return to the Caribbean (Worth 2014:52).

Ponce de León believed he had made landfall in Beniny (modern-day Bimini Island), but subsequent voyages proved, in actuality, that the island was a peninsula. In 1514 Ponce de León again secured an expeditionary charter. On this second expedition, which was delayed until 1521, he loaded two ships with men, priests, horses, and livestock and headed back toward the Calusa. He hoped to establish a colony in southwest Florida, but it was quite apparent that the Calusa did not wish to host the Spanish. Calusa warriors killed several members of the expedition and sent Ponce de León to Havana with an arrow wound. For hundreds of years, historians have alleged that the *Adelantado* died of an arrow wound to the thigh shortly after arriving in Cuba. While one vague service record (Troche 1582: f.3r) claims that Ponce de León died in Florida, the 1523 probate record (Indiferente General 1523:f.163r) of the *Adelantado* specifies that he died in Villa de San Cristobal near Havana. The probate, specific in many other respects, does not mention the arrow to the thigh (Worth 2014:63-69). Incongruities aside, Ponce
de León did die in 1521 and took to the grave any Spanish desire to visit Calusa territory, at least for another forty years.

While Ponce de León charted the western side of the peninsula, Pedro de Quejo and Francisco Gordillo sailed as far north as Winyah Bay on the east coast. There they captured sixty Indians, whom they carried back to Santo Domingo as slave cargo (Milanich 1999:59). Two competing aristocrats, Lucas Vásquez de Ayllón and Ortiz de Urrutia, had sponsored the slave raid in exchange for reconnaissance of the Florida coast north of the St. John’s River. Both aristocrats intended to establish a colony on the east coast of Florida, but Ayllón succeeded in securing the official charter (Peck 2001). In 1525 he sent Quejo back to the peninsula in order to locate a suitable harbor for his planned settlement.

Upon receiving an optimistic report from Quejo, Ayllón set sail for La Florida with 600 men, women, children, priests, doctors, and slaves. He led five ships to modern-day Sapelo Sound (Ayllón 1560: f.5r). For his colonists he built a small village of houses and a church, which he called San Miguel de Gualdape. The settlement was nothing short of a disaster. The colonists suffered fires in the encampment, and Guale Indians raided on several occasions. The colonists went hungry, sick, and cold in a matter of months (Milanich 1999:62). Ayllón’s service record, submitted by his son, estimates that the expedition lost “the majority of the people” (Ayllón 1560: f.5r). Ayllón died within two or three months, and because funding for the expedition dried up his estate assets, he left his family penniless (Ayllón 1560: f.5r).

The East Florida colony was a disaster, but bad news travelled slowly. Before Spain learned the fate of Ayllón’s colony, the Crown had issued a charter for Pánfilo de Narváez to connect La Florida to Mexico with a line of forts and, ultimately, to settle modern-day Texas. Narváez sailed from Spain to Santo Domingo with 600 colonists in a five-ship fleet (Hoffman
From there the fleet sailed to Havana, and in February of 1528, they lifted anchor. After a hurricane blew them off course, the ships landed just north of modern-day St. Petersburg (Milanich 1999:64). The colonists erected a temporary camp on the bay, but Narváez intended to move westward and so arranged a scouting party to search for a more suitable harbor (Milanich 1995:117).

As the troops marched through the Tampa Bay area, they encountered several Tocobaga villages. The men were surprised to find that these people, who had no direct contact with Spaniards, possessed a wealth of Spanish goods. The Tocobaga showed off caches of gold, cloth, feathers, and, most terrifying to Narváez’s men, wooden shipping crates that now held the corpses of “dead Indians.” In all likelihood, these goods were salvaged from a ship that had wrecked on its way from Veracruz to Spain (Milanich 1999:64). When pressed, the Tocobaga insisted that the gold had come from “Apalachen” to the north (Cabeza de Vaca 1922:11-13). At this time Narváez set his sights on Apalachee, where he expected to find not only gold but also cornfields to feed his starving men. In May of 1528, Narváez set off with a 300-man party for Apalachee. As they passed through Timucua territory and into the southern boundary of Apalachee, native captives deliberately guided the party over the roughest terrain and through the most hostile of villages (Milanich 1999:67). In the vicinity of Apalachee Bay, the expedition finally dissolved. The remaining members, including Cabeza de Vaca, constructed a makeshift barge in order to cross the Gulf to safety (Mitchem 1989). Following one hardship or another, each party member—including Narváez—died, disappeared, deserted, or ended up captive to an indigenous population.

Notwithstanding the incredible losses in La Florida thus far, the Spanish Crown continued to grant exploratory charters. In 1538 Hernando de Soto acquired permission to
explore inland from Narváez’s landing. The charter also directed him to pacify 200 leagues of the Florida coast and to establish three stone forts (Milanich 1993:15). At the outset it appeared he might exceed expectations. Better prepared for an entrada than his predecessors, Soto was cautious and over-armed. From May 1539 to March 1540, he marched troops from Tampa Bay to Georgia. He and his men responded to Indian resistance with methodical executions, uninhibited massacres, and the taking of hostages (Hudson et al. 1984; Lankford 1993). The soldiers then spent an entire year trekking as far as Arkansas in search of gold. Only 311 members of his expedition arrived safely at a Spanish settlement in Tampico, Mexico, but the Adelantado was not with them (Milanich 1993:22). Soto died of a fever on the banks of the Mississippi in June of 1542.

Although they failed to find gold, Soto’s expedition furnished the Crown with an accurate depiction of the Southeastern interior. Still, the Spanish knew little of the resources and people of the gulf coast of Florida. The Ponce de León and Narváez expeditions to the Gulf had been brief. Members of those parties paid more attention to surviving than reconnoitering. In 1549 the Dominican friar Luis Cancer arrived among the Tocobaga to Christianize Indians in western Florida, but the indigenous population met Cancer with mistrust. When he intervened in the Tocobagas’ capture of three of his European companions, the Tocobaga murdered the friar and quelled, for a time, Spanish attempts to missionize the Gulf Coast (Murphree 2002:145). It was the machinations of Viceroy Luis de Velasco and Tristán de Luna y Arellano which brought an official Spanish expedition to the Gulf Coast.

Velasco believed it was time to secure the infamous overland route between Mexico and east Florida. As he prepared to apply for a charter, Mexico’s commercial output was expanding. Gold, silver, and artisanal goods flowed out of Mexico and into European markets in mounting
volume (McGrath 2000:22). If Spain could establish and maintain a route across Florida, they could minimize the threats that Florida’s unpredictable storms and coastlines posed to their lucrative exports. Merchants could send goods by land to Santa Elena, load them on to ships, and send them directly across the Atlantic (Milanich 1995:196). The charter aimed to link Mexico and Santa Elena with a secure overland route. Santa Elena was more important to the Crown than any site along the Gulf Coast, and the king ordered Velasco and his hire, Luna, to establish a settlement there. Modern-day Pensacola Bay, or Ochuse Bay, as the Spanish called it, was to serve as a strategic juncture in the overland route (Lyon 1981:279).

In June of 1559 Luna left Veracruz, Mexico with 1500 colonists and eleven ships. Just five weeks after they arrived at Ochuse, the expedition lost seven ships, half his supplies, and an unknown number of colonists in a sudden and violent hurricane (Hudson et al 1989:34). Luna sent reconnaissance parties north through Alabama and Georgia in order to locate food for his surviving colonists. The northward expedition failed, and the settlement in Pensacola continued toward inevitable dissolution. In April 1561 Angel de Villafañe arrived to transport the remaining survivors to Santa Elena. No sooner had Villafañe arrived in Santa Elena than a hurricane sank a number of his ships, sending his expedition back to Havana (Milanich 1995:42). Thus, Villafañe concluded the first fifty years of the Florida *entrad*a much the way it had begun, retreating to the Caribbean.
At last the toll of Florida exploration was too great to ignore. Phillip II, reigning king of Spain, wrote to Don Luis Velasco,

By reports which we have received from persons who have been in Florida, we have learned of the bad failures of our various expeditions… Considering that so much money has been expended in said expeditions and the poor results we have obtained… it is not sensible to expend any more money from our Treasury in populating that land, or in founding a town at Cape Santa Elena. (Phillip II 1968:127)

To further justify his decision, he believed there was no danger of the French claiming Santa Elena or any territory in the vicinity of East Florida. Not even a year after Velasco received the letter, however, French Protestants, or Huguenots, entered the mouth of the St. John’s River. In early 1562, Admiral Jean Ribault and nobleman René Laudonnière unloaded 30 colonists near modern-day Jacksonville (Bennett 2001:14-15). The two men oversaw the establishment of Charlesfort at Santa Elena before returning to France to gather additional supplies and colonists.

In 1564, Laudonnière returned to Jacksonville with Huguenot men, women, and children in order to continue his work at Charlesfort. The initial settlement at Charlesfort had dissolved, so Laudonnière rebuilt in a location near present-day St. Johns Bluff. He constructed the new settlement, Fort Caroline, with the aid of the colonists and friendly Timucuan Indians (Laudonnière 2001:72). The initial months on the banks of the “lovely river” were promising for the colonists, but the antagonized Spanish king was soon on their heels (Bennett 2001:67).

Ribault had just arrived at Fort Caroline with fresh supplies and colonists when the ambitious Spanish captain Pedro Menéndez de Avilés arrived with eight armed ships. He was there to remove the French Protestants from Spanish Catholic territory forcibly (LeMoyne
1968:112). The Spanish fleet was unable to clear the sandbar to enter the St. John’s River, so Menéndez retreated south to his fledgling settlement of St. Augustine. Ribault decided to ambush the Spanish settlement against the advisement of the officers at Fort Caroline. Leaving Laudonnière at the fort, Ribault sailed southward; but just as he lifted anchor, a hurricane pounded the fleet and sank every vessel (LeMoyne 1968:113-114). When Menéndez realized what had happened to the French fleet, he marched his soldiers overland to Fort Caroline, stormed the walls, and slaughtered the majority of the colonists (Bennett 2001:36). The obliteration of Fort Caroline reinforced the permanence of a Spanish presence in Florida. Even more pivotal, the events of 1565 forced Phillip II to reconsider his doubts about settling La Florida.

Pedro Menéndez and Diplomacy by Deceit in La Florida

When the struggle for sovereignty finally played out between the Spanish and the French, Menéndez had secured the Florida coast for the foreseeable future. Phillip II had primarily granted a charter to Menéndez with foreign encroachment in mind. For the assault alone, he sent the adelantado 1,500 infantrymen, a fleet with a Captain-General for advances by sea, and a field marshal and five additional captains for advances by land (Phillip II in Bennett 2001:126-127). Nothing distracted the royal vision for Florida, and fortunately for the king, Menéndez was a competent leader. After half a century of mishaps in Florida, he was the first adelantado to fulfill the totality of his charter. In addition to banishing the French from Florida, his charter required that he organize a military expedition to the interior of the Southeast, plant missions among the Indians, and settle Santa Elena (Milanich 1999:88-89). He accomplished all this, and, most importantly for Spain, launched a legitimate colony.
Menéndez recognized that Florida had few resources to exploit. Rather than pour labor and funds into agriculture and raw material production, Menéndez’s first gubernatorial project was to make military investments (Bushnell 1994). He placed garrisons strategically to defend against rebellious natives and encroaching French and British colonists. In a letter to the king, Menéndez explained that he planned to assign soldiers to indigenous towns, where they would learn the languages, grow accustomed to the geographies and roads, and become friends with the chiefs. He hoped to deploy these soldier-ambassadors to every major village and to fortify the Florida coastline fully within two years (Menéndez de Avilés 1566:f.171v). In just eight months he established three presidios along the coast of Florida and South Carolina. By 1567, his gubernatorial office managed seven more of these fortified garrisons (Childers 2004:24). The leadership of Menéndez assured that even if Florida were unable to create internal sustainability, the infant colony would have few security concerns.

With the French discouraged for the meantime, Menéndez could afford to focus on building an administrative base in St. Augustine. In October of 1565, he wrote to the King, “As we establish the place and build a good City, there will be no need of founding others in Florida.” Instead of populating Florida, he proposed, it would be more beneficial to build a route from St. Augustine to the silver mines of Zacatecas, “and the silver worked from them will support this country and be a treasure to Your Majesty” (Menéndez in Bennett 2001:139). He set about his project to turn St. Augustine into a bottleneck for economic, social, and religious oversight in Florida. Theoretically, every drop of oil, every granule of sugar, every friar’s habit, and every ducat should pass through St. Augustine on its way in or out of Florida. Of course, corruption and illicit trade remained; but for the purposes of administration, St. Augustine managed Spanish enterprise effectively for more than a century (Bushnell 1994; Deagan 2007).
Menéndez had designed the system to perpetuate a cycle of dependency, which would in turn lead to growth. Presidios, missions, and remnant chiefdoms depended on the flow of goods, food, and funds for survival. In order to maintain the flow, they pledged labor and obedience to the Spanish governor in St. Augustine (Milanich 2006:111).

Menéndez manufactured the Florida system, but existing royal policies were critical for its endurance. Beginning in 1570, the Crown became the primary funding source for benefits and protections to the people within the jurisdiction of St. Augustine. The Real Hacienda, or Royal Treasury, was responsible for issuing the annual payments called situados (Sluiter 1985:1). The situados subsidized everything from troop salaries to missions, churches, and royal appointments. As a result of the subsidies, Florida’s economy was progressively inorganic, and the colony suffered when the situados arrived late or incomplete, as was often the case (Bushnell 1994:208-211). When the situados did arrive, they went through the hands of St. Augustine’s officials who took a high cut before passing the portions of the subsidy to interior missions and garrisons (Arnade 1960:279).

Another significant feature of the Florida economy was the policy of fixing prices for goods and services. Severely restricting market fluctuation was the key to controlling free enterprise in Florida. Consequently, government officials found it easier to preserve the sociopolitical hierarchies of their bureaucracy (Bushnell 1994:210). Fortunately for Menéndez, it was easy to introduce his bureaucratic structure to indigenous populations. Florida natives typically comprised small, self-contained chiefdoms. Each chiefdom had a long-established tradition of chiefly authority well before the arrival of the Spanish (Hudson 1997:2). Menéndez discovered that he could subordinate entire indigenous populations if he presented their political leaders with goods and services from the situado budget. As personal incentive for the chiefs, he
offered gifts and recognized their chiefly legitimacy on behalf of the Crown (Menéndez 2001:134; Solís de Merás 1967:204). Until his death in 1574, Menéndez exuded aptitude in transforming economic, social, and political policies into temporary stability.

After his victory at Fort Caroline, Menéndez intimated that it was his only option to obliterate the Huguenots because “they were scattering the odious Lutheran doctrine in these Provinces,” whereas God and the king had ordered him “…to place the Gospel in these parts and to enlighten the natives in all that the Holy Church of Rome says and does so as to save their souls” (Menéndez 2001:134). His account of the incident defies remorse for the massacre. Surely he hated the idea that the French had reached out to the natives with Protestant evangelism; and as one historian declared of Menéndez’s military style, “the explanation was simple: he chose whatever course of action seemed in the best interest of his king and country” (Manucy 1965:70). But perhaps more than hatred for Protestantism and more than patriotism, intimidation compelled Menéndez to react so violently. He confessed that it was an “…admiration to see how these Lutherans enchanted the poor savage people” but believed the Indians to be “traitors, thieves, and drunkards” (Menéndez 2001:132). Not only had the French beat him to Florida, but they had beat him to the Indians, and his personality was not one to accept second-best. Whether he wished to forge genuine alliances or not, he had to eradicate the accomplishments of his competitors. Unlike his predecessor adelantados, Menéndez realized that he must build rapport between the colony and the Indians if he wanted La Florida to survive.

When Menéndez arrived in Florida, the Calusa chiefdom was engulfed in a high-profile family drama. The feud involved the family members of a man named Senquene. As paramount chief, Senquene had shared the responsibilities of shaman and captain-general with his brother and brother-in-law. Having no heirs, Senquene adopted the son of the captain as his own son and
named the boy successor to the chiefly line. Before the boy came of age, Senquene died. With no one to provide legitimate leadership, the shaman designed a provisional regency and installed himself in the highest position. Even after the boy, Felipe, reached an appropriate age, the shaman continued to govern the chiefdom. He then proceeded to grant the chieftaincy to his own son, Carlos. Felipe received an appointment to the vacant captain’s post (Hann 2003:169-172). Menéndez was privy to the tense situation and was aware that the feud might play to his advantage. Indeed, the animosity between Carlos and Felipe eventually imploded in the Spaniard’s favor.

Menéndez’s first approach to the town of Carlos had an official mission: to determine whether the Saint Johns River was navigable to the south. Navigability of this river, which flowed through Calusa territory, would allow Spanish ships to bypass the dangers of the Florida Keys on the voyage from Cuba to St. Augustine. Spaniards hoped that the river flowed from the southwest coast of Florida to the northeast, effectively cutting straight through the peninsula (Menéndez de Avilés 1566; Solís de Merás 1964:206). Menéndez had a personal agenda, as well. There were rumors that Spanish shipwreck survivors were living among the Calusa as prisoners. In 1561, his son Juan had shipwrecked off the west coast of Florida, and Menéndez believed him to be alive (Escalante Fontaneda 1575:6r). If circumstances proved fortuitous, the expedition might locate his son and the riverway.

Menéndez did not locate his son, but it was during this expedition in February of 1566 that the adelantado encountered Hernando de Escalante Fontaneda and at least nine other Spanish captives (Lyon 1988:5). In a deceitful maneuver, Menéndez invited Carlos and his officials aboard a Spanish ship moored in Estero Bay. Menéndez then lifted anchor and sailed off shore. He bargained the Calusas’ freedom for release of the rumored Spanish captives (Hann
Menéndez also offered Carlos friendship and military support against his enemies. Carlos agreed to the conditions, telling Menéndez he could gather the captives on shore the next morning. Carlos was actually plotting to kill the Spaniards when they arrived on shore, but Menéndez had more men with him than Carlos had planned. Felipe revealed the plan just as Carlos decided not to attack.

The events of the first visit set precedence for future negotiations with the Calusa. Ponce de León had been the only other adelantado to encounter the Calusa; obviously, his relationship with them had been tenuous. Menéndez believed that gifts could placate the Indians, but from experience he knew that deception always commanded their obedience. During one visit, he gifted the chief with a shirt, silk breeches, and a hat and then offered his entourage biscuits and honey (Solís de Merás 1964:147). Ever the deceptive diplomat, Menéndez won the favor of the chief with gifts but rarely complied with the terms of their negotiations. He broke successive promises to the Calusa and, with an aggressive and micro-managerial flourish, dispatched 30 troops to establish Fort San Antón within the town of Carlos (Hann 2003:174). During the February visit to Carlos, the chief forced Menéndez to marry his sister, princess Doña Antonia, as a symbol of his allegiance. Menéndez married Doña Antonia though he had a Spanish wife already. Instead of keeping the Calusa wife by his side, Menéndez sent her to live in Havana for Catholic instruction (Solís de Merás 1964:152).

Perhaps the most contentious issue for the two leaders was that Menéndez continually designed ways for Carlos to make peace with his enemies. Carlos made it clear that he needed Menéndez’s help to attack the Tocobaga at Tampa Bay. Menéndez only humiliated Carlos by insisting that he reconcile with the Tocobaga chief, his primary enemy (Hann 2003:173). Carlos grew more impatient with every Spanish trick. He had been plotting to kill Menéndez and the
garrison soldiers for quite some time when Felipe warned Menéndez of the scheme. Menéndez took the intelligence and turned against Carlos, ordered his assassination, and installed Felipe as the principle chief.

Felipe realized soon after his ascent to the chieftaincy that his chiefdom had a complicated relationship with the Spanish. For one thing, Menéndez pestered the chief relentlessly to convert to Christianity. But conversion was more than just a matter of spirituality for Felipe. If he expressed interest in converting, his vassals accused him of treachery; but if he did not convert, the Spanish did not recognize a full alliance with him (Hann 1991:240). In 1567 Menéndez returned to the town of Carlos with Fr. Rogel. This Jesuit friar was a zealous instructor who performed all manner of proto-ethnographies on the Calusa as he urged them to convert. He observed their pagan rituals, made inquiries into their beliefs, and offered them maize in order to incite dialogue (Rogel in Hann 1991:239). He guided Felipe through examinations of conscience and even seemed to have the chief convinced that he should renounce his pagan ways. In the end, however, Felipe did not consent to baptism. Ironically, the main sticking point was not Christian dogma in general but the fact that Fr. Rogel would not permit the chief to marry his own sister (Rogel in Hann 1991:240-243).

Felipe’s resistance to Christianity was a salient example of the chief’s struggle to maintain outward appearances for the sake of his political position. Calusan chiefs found political legitimacy in exclusive knowledge of the divine and by participating in traditional religious ceremonies (Goggin and Sturtevant 1964). By relinquishing aspects of the chiefly cult, Felipe signaled to his vassals that he was no different than they. As Menéndez saw it, Felipe owed a lot to the Spanish for helping to oust Carlos. Not only had they installed Felipe as chief, but Spanish troops were continually on hand to quell rebellious plots (Hann 1991:223). From
Felipe’s standpoint, it was convenient to accept Spanish support, but to do so increased his sociopolitical vulnerability. Felipe’s vassals had challenged his chieftaincy from the outset. Four towns even declared sovereignty and then pledged allegiance to the Tocobaga in 1567 (Worth 2014:36). Indeed, Felipe’s primary concern was cohesion of the chiefdom for the duration of his chieftaincy. While he wished to gratify Spanish requests, his primary concern was to retain prestige among his own people.

If the principle chief was unwilling to abandon the indigenous religion, there was no chance that his vassals would seek conversion. Fr. Rogel’s struggle with the Calusa was deeper than doctrinal ideology. Despite prayers, appeals, and small bribes, the vassals responded to Fr. Rogel that it was not possible for them to abandon their idols unless the chief did so first. First and foremost, they lived in the “faith of their betters” (Rogel in Hann 1991:246). Fr. Rogel returned to Havana without having performed a single baptism.

The Spanish garrison at Carlos lasted scarcely three years. Geographer Juan López de Velasco reported that after a series of Calusa rebellions, Menéndez ordered the beheading of Felipe and twenty-two of his officials at Carlos (Velasco in Hann 1575:309). One Spanish soldier later testified that he slit the throats (degolló) of “the most guilty” (Worth 2014:38). Menéndez alleged that the Calusa had conspired to murder the Spaniards and had attacked a Spanish supply ship as it neared the fort at Carlos. Whether or not the accusations were legitimate and the punishments warranted, it was clear that the Calusa had a mounting intolerance for Spanish presence. After the execution of Felipe and his officials, residents of Carlos fled Mound Key and left Fort San Antón without a supply of laborers (Worth 2014:39). In June of 1569, Menéndez ordered troops to abandon the garrison, a decision that left the entire
Calusa territory without a single Spanish outpost. The Calusa remained outside the sphere of the Spanish colonial campaign for another forty years.

*The Carrera de Indias in the Late-16th and Early-17th Centuries*

Although seafaring had developed since Columbus’s New World discovery, Florida waters continued to vex 16th-century Spanish enterprise. Leaving Havana, ships sailed with the wind and the current to the tip of the Florida peninsula, where they entered the narrow pass between Florida and the Bahama Islands (Chaunu 1983:196-197). Just beyond the Florida Straights, the route fed into three-knot currents of the Atlantic that united Spain with her colonies (Figure 2). The route, or *Carrera de Indias*, was dangerous to navigate, even for expert mariners. Despite its hazards, the *Carrera* was indispensable to Spanish enterprise, because it was the only route for transporting goods in and out of the colonies legally (Deagan 1987:19).

![FIGURE 2. Atlantic Currents and the *Carrera de Indias*. (Figure by author, 2014.)](image)
In 1575, Captain Juan de Escalante de Mendoza presented the King with an itinerary of navigation from New Spain to Seville, Spain. Having spent his life as a sailor, he had much to recount regarding the perils of seafaring (Escalante de Mendoza 1985:245). This following translated excerpt is Escalante de Mendoza’s advice for successful passage through the Florida Straits:

…Ships that have departed from the port of Havana headed for the coasts and ports of Spain ought to depart and set sail with the land breeze in the morning in the clarity of daylight. And having passed outside of the Morro [landmark at the entrance to the port of Havana], the ship ought to turn to the sea with the land breeze until noon has passed. And after noon passes and the land breeze turns to sea-breeze, the ship ought to turn back to land in order that it might be near it when the night falls and windward of the very port from which we set off. And having spent the night, it ought to turn toward the sea with a steering of northeast toward the Cabeza de los Mártires [Florida Keys], which is at a position of 25 degrees to 40 leagues from the same port of Havana. This distance is usually navigated in very little time on account of the currents that line up through here and go right, launching [the ship] into the Canal de Bahama, for which it will be necessary that whomever navigates through this part achieves vigilance, caution, and attention, staying awake all night, looking for land and for the edge of the islands and the reefs of the same Cabeza de los Mártires, which are a quantity of islets of sand, some with thick vegetation, and that which is in the middle is bigger than the rest and it has a crown of white sand. And, in rounding all of these islets and Cabeza de los Mártires, it [the ship] ought to steer north-northeast
toward the length of the coast of Florida, not approaching too close to it until a position of twenty-eight and a half degrees. And being in at this very position, they will be led out of the strait. (Escalante de Mendoza 1985:193-194, translated by author)

Florida colonists looked to the *Carrera flotas* (fleets) to deliver basic necessities from Havana, and merchants in Spain relied on the *flotas* to deliver the profits from New World investment. In 1561, the Crown instituted the *Flota de Indias* in order to protect individual ships. This convoy system required royal ships to meet in Havana and then sail together on the return to Europe (Pino de la Fuente and Garcia 1996:1).

Ships making the *Carrera* voyage were constructed carefully to withstand the climatic extremes of the Atlantic Ocean, and to accommodate the crew, a month’s-worth of provisions, and an ever-expanding volume of commercial cargo. Spurred by royal contracts and commercial demands, shipwrights began to build ships bigger and faster during the 16th century (Castro 2008:73). Vessel construction had advanced to such efficiency that *Carrera* traffic decreased between 1550 and 1600 (Chaunu 1983:224-225). The increase in ships’ cargo capacities allowed for Spain to make fewer voyages but to increase the volume of imports and exports. Increases in cargo capacity were profitable for merchants on both sides of the Atlantic, but the common practice of over ladening exaggerated the risk of the *Carrera*. The loss of a bigger ship equated to the loss of an exponentially-greater investment.

While advancements in ship construction were expedient for the Atlantic leg of the *Carrera*, it was cumbersome to maneuver ocean going *naos* (Mediterranean style carracks),
caravels, and galleons through the Straits of Florida. Hazards for these large watercraft ranged from rocky shoals, sand bars, and coral reefs to unpredictable tropical weather (Velasco in Hann:312-313). When the vessels reached the Guadalquivir River on the other side of the Atlantic, they again risked grounding, because they were less buoyant in the freshwater of the river than they were in salty seawater. It was not uncommon—and legal, in fact—for the crew to throw cargo overboard to reduce the draft of ocean going vessels as they navigated fresh waters (Lyra 1647:79). Human error only intensified the environmental obstacles: fluctuations in the Earth’s magnetic field rendered incorrect compass headings; lines of longitude did not yet exist, making it difficult for navigators to calculate sailing distances in the east-west direction; and poorly drawn charts and uneducated pilots plagued the burgeoning shipping industry (Sandman 2004).

Private and government sponsored merchants acknowledged that the Carrera was crucial to enterprise, but they began to express concerns that the risks of the Carrera were disproportionate to the capital of their investments. During the first half of the 16th century, committees of private merchants formed in Iberian cities like Burgos, Cádiz, and Seville. These committees, or consulados, financed voyages, regulated insurance policies on ships and shipments, and offered legal counsel for merchants who lost inventory along the Carrera (Alonso 2012). Today, consulado documents and similar government records are the mainstays of historical and archaeological research into the maritime landscape of early colonial mercantilism.

Seville was not the biggest, most powerful city in Spain during the 16th century, but it was the most important city for the Empire’s commercial dealings in America. Seville had proven a strategic outpost for the Phoenecians, the Romans, and the Moors. Under Castillian
auspices, the inland city claimed a monopoly on the Carrera. For the sake of efficiency, western Andalusia or Gibraltar should have been the first European stop in the Carrera, but the vulnerability of the coastline to North African marauders made such locations unfavorable for offloading New World imports. Seville provided inland protection at a location just a short journey up the Guadalquivir River from the beaches of San Lúcar de Barrameda (Phillips 2005:825).

In 1503, the Catholic Monarchs established a House of Trade, or Casa de Contratación, to regulate Seville’s growing commercial traffic. Administrators in Seville set about organizing a system of accountability for trade and shipping in the Americas (Fernando e Isabel 1503). For taxation and inventory purposes, the Casa de Contratación standardized the bookkeeping of goods moving in and out of the Americas. Accountants specified cargo quantities, weights, measurements and costs of goods in Datos y Cargos (Debits and Credits) or in Registros de Ida y Vuelta (Registries of Departure and Return). Accountability was the initial concern, but the agency grew to include navigational training and recruiting of world-class cartographers and cosmographers (Sandman and Ash 2004:817-818). Within one generation Seville had monopolies on both royal and private enterprise in New Spain. The commercial laws required government officials in the colonies to send eastbound flotas to Seville; but many, including Pedro Menéndez, also sent private cargoes to the European market by way of the same city (Alonso 2012:993). In 1543, merchants in Seville established their own Consulado de Cargadores de Indias for the dual purpose of providing a network for private commerce and mitigating maritime lawsuits related to the Casa de Contratación.

By the late 16th century, transatlantic ships typically departed the New World with luxury items for the European market. Silver and gold bullion, leather, sugar, wood, and spice
were common cargo for these Spain-bound ships (Pino de la Fuente and Garcia 1996). When General Juan Gutierrez de Garibay (1598) registered his private fleet in Veracruz, he listed expensive cargo, including five *arrobas* (pounds) of high quality cochineal wrapped in cow hides placed in “three crates tightly nailed and well packed and marked.” Presumably because of the value, shipmasters went to great lengths to protect merchandise for the transatlantic voyage. Meanwhile, Florida had not developed a diverse market for trade. Until the generation of 17th-century settlers reified a class system in Florida, there was hardly a focus on importing luxury items (Deagan 1987:19). Instead, ships sailed from Havana to Florida with supplies of food, wine, textiles, footwear, clothing, weapons, and manufactured goods (Pino de la Fuente and Garcia 1996).

*Spanish Losses, Calusa Gains*

When shipments arrived in St. Augustine, the keeper of provisions received the cargo, audited the items, and stored the goods in a royal warehouse. He then directed overland distribution to peripheral garrisons from the central warehouse in St. Augustine. At the time, this system was efficient for the majority of colonial outposts, but the overland distance between St. Augustine and southwest Florida was too far for efficiency’s sake. Instead, ships from Havana delivered supplies directly to Blas Alvarez, the keeper of provisions at Carlos, Tequesta, and Tocobaga. In one shipment from Havana, received volumes of flour, wine, oil, vinegar, biscuits, and meat (Hann 1991:305-308). Garrison troops presumably subsisted on these supplies, but information from Fr. Rogel’s letters indicates that local Indians received food handouts as well. The friar reported that he occasionally offered small amounts of European food to entice the
Calusa to join him in catechism lessons (Rogel in Hann 1991:239). It was early in his interactions that the friar recognized the allure of European goods among the Calusa.

Prior to European influence, there were two avenues for Calusa chiefs to build legitimacy and prestige: a proprietary claim over the cultic experience and an amassment of material wealth, including exotica beyond that which local resources provided. Spaniards, with their religion and their gifts, introduced the chiefs to a new source of prestige. They brought commercial scale exoticism. Felipe demonstrated that Christianity was not a viable source of prestige for himself, but he understood that he could incorporate European novelties into a spectacle of affluence without minimizing his authority. Provided that the chief could keep the items out of circulation, they would remain exotic. When receiving trinkets like scissors, beads, cloth, mirrors, or knives, he expected to return the gesture with fulfillment of some Spanish request. If there was a way for him to accumulate foreign goods without the influence of the Spanish, however, it would be possible to bypass the negotiating phase. Shipwrecks offered the exotic goods minus the diplomatic hurdles. The socioeconomic system was nothing new; rather, Spanish novelties were the newest addition.

Not only could the Calusa chief utilize his existing tributary system to gather shipwreck spoils, but his vassal salvagers also belonged to a culture rooted in marine exploitation. Europeans noticed that the Calusa chiefs were quick to take advantage of shipwrecks by organizing salvage expeditions. Escalante Fontaneda (1575:f.6r) related a story that another shipwrecked captive of the Calusa told him about a particular salvaging incident, “the Indians armed themselves to go to the coast of Ais, and he saw them go and return with great riches of bars of silver and of gold and sacks of silver coins and much clothing.”
Fontaneda also claims to have witnessed the salvage-to-tribute process personally:

I wish to speak of the riches that the Indians of Ais obtained, which would be as much as a million or more in bars and in gold and other jeweled things made by the hands of the Mexican Indians that the passengers carried. The Casique of Ais and Jeaga and Guacata and Mayajuaca and Mayaca distributed those things, and he took that which seemed the best on those ships and others mentioned. And [he also took from] the sunken caravels and the Indians of Cuba and Honduras that were lost in search of the River Jordan, which came wealthy. And Carlos and [the Indians of] Ais and Jeaga and the Islands of Guargunbe collected all of it. They are rich, as I have said, only by the sea and not by the land. From Tocobaga to Santa Elena, where there is a coastline of sixty leagues, there is no gold and even less silver natural to the land. Rather, it is as I have said, by the sea.

(Escalante Fontaneda 1575: f.6v-7r, translated by author.)

If Fontaneda’s account is reliable, it provides significant insight into Calusa salvage activities. While they may have combed the beaches for buoyant items such as cloth or wooden crates, caches of silver and gold probably did not wash up in the surf. The account of recovering stones and metals suggests that they did not simply pick through debris but perhaps were free diving as well. Furthermore, Fontaneda’s account hints that the Calusa chiefdom belonged to a greater network, which had institutionalized shipwreck salvage for profit.

For the Spanish parties involved, a shipwreck was a tremendous loss of life and commodity. Investors, merchants, government agencies, and shipmasters had a number of contingency plans to confront shipwreck losses. An early-17th-century lawsuit indicates that at least one captain hired a professional diver to recover valuables from his sinking ship. In the
lawsuit, “Juan Cabrera, Diver” complains that after having risked his life to recover 36,000 pesos worth of silver from a burning vessel, the captain did not deliver the proper compensation. Juan Cabrera (1621) contends that he never received the standard six-percent cut of the silver he free-dived to recover. In addition to diving, Spanish salvagers utilized nets, diving bells, and grapnel hooks (Muckelroy 1979:10). In the early 17th century, one engineer, don Geronimo de Ayanz (1605) presented a design for his unusual salvage apparatus, which employed pulleys, pipes, and animal skin air bladders to lift heavy items off the sea-floor. Even if such methods were effective, recovery was not guaranteed on the Florida frontier. Based on Fontaneda’s account, it seems that news of a shipwreck swept through indigenous communities but was slow to travel between Spanish outposts.

The Legacy of Contact in Southwest Florida

In retrospect one could argue that the Spanish lost more to Florida than that which they gained, yet 16th-century Spaniards incorporated Florida into the Caribbean enterprise with admirable determination. The narratives of Florida’s early adelantados demonstrate extraordinary willpower. Under the management of the Casa de Contratación, the Carrera de Indias became a lucrative route to the Americas. Along that route, Menéndez staked his strategic claim. Menéndez managed to stave off Indian opposition at his primary garrisons in East Florida, but he struggled to assert control in more distant areas of the peninsula. To the southwest, the Calusa had a chieftaincy, a spirituality, and a lifeway that they did not wish to abandon. They did, however, appreciate the exotic and aesthetic qualities of European items. While the Calusa might negotiate to obtain items, shipwreck salvage was a more organic and less concessionary way to come by these commodities. The Calusa extended their influence beyond their own territory and forged alliances with chiefdoms in order to exploit wrecks along the Florida coast.
Although formal contact between the Spanish and the Calusa was intermittent throughout the sixteenth century, the Calusa had a relationship with the Spanish maritime landscape. This relationship manufactured a unique culture contact, which affected Calusan culture to a visible degree.
CHAPTER III.
THEORY

Archaeological deposits provide access to people, processes, and events of the past. They pique the anthropological imagination and prompt complex questions about human behavior. With archaeology, it is possible to address some of those complex questions. An array of perspectives, from empiricism to positivism, helps draw meaning from the archaeological record. Decades of practice and dialogue have made a dynamic body of method and theory available to the current generation of archaeologists. We are able to build off the work of empiricists like Richard Gould (1985) and James Hill (1991) and assume that material interpretation is a valid gateway to an objective past. Alternately, we can take Ian Hodder’s (1991) and Shanks and Tilley’s (1987) approaches and assume that our interpretations reaffirm present sensibilities more often than they reflect the cultures of the past.

Contemporary archaeology provides systematic techniques for gathering, recording, and interpreting the byproducts of human practices. American archaeologists tend to agree on standard techniques for gathering and recording, but there are multiple ways to interpret data. Descriptive interpretations are rooted in observations of the material record. They construct precise typologies for the observable qualities of material culture, but they tend to stop short of broader anthropological observations. Explanatory interpretations transition beyond observation, providing substantive answers to anthropological questions (Leone 1991: 237-240). They consider datasets and typologies not as ends-all but as the means to an end.

This thesis relies on a diversity of theoretical and methodological perspectives in an attempt to understand Calusa salvage behavior. The goal of this research is not to reprise the
narrative of asymmetrical colonial dominance. Rather, it is to articulate the Calusas’ exercise of real and measureable agency through the appropriation of salvaged Spanish objects. In order to accomplish such a goal, this thesis tacks between polarized techniques and concepts: processual and post-processual perspectives; terrestrial and underwater methods; and synchronic encounters and diachronic processes. The content of this chapter provides a brief overview of each concept and demonstrates the ways in which they converged to orient this study.

Historical Processualism and Contemporary Practice Theory

In a 2001 publication, Mississippian-era scholar Timothy Pauketat introduced historical processualism as “the emerging paradigm” (Pauketat 2001). As one century of heuristic development shifted to the next, he urged archaeologists to depart from the behavioral analogies that had become so popular. Pauketat advised practitioners to stop inferring the reasons for culture change and, instead, to explain the changes themselves. Pauketat’s frustration with late 20th-century paradigms, like neo-Darwinism and cultural ecology, stemmed from their neglect of long term changes. His interests revolved around that which he termed the “cumulative effects of practice.” “Those cumulative effects, the cultural creations at microscales and macroscales, are what we typically call history,” he explained (Pauketat 2001:81).

In many ways, Pauketat’s historical processualism was a throwback to Pierre Bourdieu’s social theory. Bourdieu (1977) posited that people manufacture traditions by performing habitual behaviors. A routine behavior, whether enacted by an individual or an institution, becomes a practice. But even when they are routine, behaviors are variable. As human reactions and environmental conditions fluctuate from one context to the next, practices evolve gradually and unconsciously.
In its earliest manifestation, practice theory was a social theory, but archaeologists recognized that it could be relevant to the study of historical transformations as well. They saw how they could use it to emphasize the discourse between practice and gradual change, while also incorporating the impacts of external agents on cultural transformations. Historical processualists give special attention to the material world, defining practice as the material embodiment of performed existence and material items as evidence of practice (Silliman 2009:216). Traditions are always exposed to environmental circumstances, negotiations between parties, and other unpredictable actors (Giddens 1979; Sahlins 1985). Thus, culture change is the sum of internal tradition plus external agents. Simply stated, the accrual of culture change at macro and microscales is history (Pauketat 2001:81).

Practice theory facilitates multiscalar evaluation of culture change, distinguishing between gradual and sudden changes, between everyday practices and structured political performances, and between internal and external agents of change. As Silliman (2009:215) explains, practice theory frames the social contexts through which “artifacts took on their meaning and became useful, symbolic, or culturally worthy.” For this reason archaeologists use the orientation to examine colonial encounters as catalysts for cultural transformation (Bardolph 2014:72). Practice theory acknowledges that brevity and longevity to characterize cultural processes and interactions (Jones 2002:70). Therefore, the orientation is relevant to colonial encounters that resulted from both sustained colonial relationships and isolated events. Practice theory acknowledges that culture contact is not a provision of face-to-face interaction; in fact, contact may be manufactured exclusively through the affiliations of one group with the material objects of another group (Robb 2010:504-505).
Objects are the products of human intention and expression; as such, they depend on social agents to manufacture, utilize, and dispose them (Silliman 2009: 214). Objects embody social structures and everyday routines, but they do not govern practice. They neither dictate the trajectory of their own lives, nor do they imbue themselves with symbolic meaning. An object-centered approach allows the archaeologist to associate particular social agents and processes with the life of the object, from manufacture to deposition.

Historical processualism did not become the dominant heuristic device Pauketat had in mind, but practice, process, and multiscalar analysis linger in the forefront of contemporary archaeological theory. For instance, American archaeologists continue to challenge assumptions about prehistoric social identities using a practice framework (Alt 2002; Wills 2009; Bardolph 2014). In the colonial context, Silliman (2009) and Vitelli (2011) approach continuity in aboriginal communities by evaluating materiality from an emic perspective. Others embed agency into practice theory as they examine the interdependence of people, objects, and historical processes (Dobres and Robb 2005; Owoc 2005; Robb 2010). In a 2004 rebuttal to critics, Pauketat clarified the historical processualism he had described previously. Historical processualism embraces agency, materiality, practice, landscape, symbolism, and numerous other perspectives, he explained (Pauketat 2004:199). It is not a rubric for evaluating the past; instead, it is a philosophical orientation for thinking about how humans engage with the world.

Practice Theory in the Context of Spanish-Calusa Encounters

Alison Wylie (1993) insists that good archaeology tacks between evidence and theory. Certainly, in an ideal study, evidence should inform interpretation. Only then may the evidence be “tested” with theory. Subsequently, grounded theory must then be validated with further
evidence. In essence, archaeology is a cyclical pursuit of empirical and theoretical links. This study seeks the links between materiality and Spanish-Calusa interaction. In evaluating 16th- and early-17th-century Calusa assemblages, archaeologists have identified many items of Spanish origin (Wheeler 2000; Luer 1994). Ethnohistorical and archaeological evidence indicate that Spanish items entered the Calusa heartland through deliberate trade and gift distribution, but it is also evident that the Calusa obtained Spanish materials via shipwreck salvage on the east coast of Florida (Escalante Fontaneda 1575; Marquardt 1986:67). This thesis identifies Spanish items on Calusa sites, assesses the likelihood that they were salvaged, and then traces the processes by which the Calusa appropriated these items.

Post-processual and critical theoreticians strive to map the cognitive connections between past people and material remains. They interpret perceptions, attitudes, and beliefs from the material world. For example, Hodder (1979), Shanks and Tilley (1987), and Leone (1996) discuss the symbolic meanings behind spatial organization, social control, and landscape construction, respectively. Their interpretations, like most post-processual and critical groundwork, involve abstract heuristics such as agency and structure. It is sometimes the case that these abstractions receive attention at the expense of fundamental concepts. Perhaps the most underemphasized of these fundamental concepts are function and meaning. When addressing function and meaning, Hodder (1985:2) hints at the dichotomy between subjectivity and objectivity. One post-processual ceramics analysis refers to function in terms of utility and meaning in terms of shared understanding (Burley 1989:102). The following section clarifies function and meaning in order to provide a basis for the model in this study.
Function and Meaning

Function describes the utilitarian properties of an object, which are both suggested and constrained by its physical form. For example, the qualities of a glass bead do not facilitate digging a hole. Small and delicate, a bead is appropriate as an element in a necklace or piece of embroidery. Alternately, an iron hoe is an ideal digging tool. Because it is durable and heavy, yet portable, the hoe is suitable for agricultural tasks but would be uncomfortable and awkward as a necklace pendant.

It is important to note that the modern conceptualizations of beads and hoes provide context for the preceding examples. The example would be different without such a context, indicating that function is both ascribed and variable. Since physical properties are inherent and unchanging unless modified by an external agent, function varies with respect to the object’s properties.

Meaning is often tied to object properties, but that relationship is more complex than the relationship between function and form. Meaning is the cognitive interpretation of an object, which (a) may or may not be confined to physical qualities, (b) is not necessarily defined by previous meanings, and (c) is esoteric to the individuals who encounter the object. Table 2 provides an elaboration for each aspect of the definition.
TABLE 2
ASPECTS OF OBJECT MEANING

<table>
<thead>
<tr>
<th>Aspect of Meaning</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Meaning may or may not be confined to physical qualities.</td>
<td><em>Perspective 1:</em> An heliocentric community perceive the qualities of the sun in the physical form of the object. They pick the fruit for cultic performances but forbid it from being eaten.</td>
</tr>
<tr>
<td></td>
<td><em>Perspective 2:</em> A neighboring community picks and eats the fruit for subsistence. Their reverence for the object derives not from the object’s likeness to a divine figure but from its sustainable qualities.</td>
</tr>
<tr>
<td>b. Because the object’s cognitive qualities are ascribed, present meaning may have no relation to prior meanings.</td>
<td><em>Perspective 1:</em> A boy collects a baseball card, because he admires the athlete on the card.</td>
</tr>
<tr>
<td></td>
<td><em>Perspective 2:</em> The baseball card is handed down through generations of a family. When a member of the fourth generation receives the card, he values it because it is an heirloom, not because it is a tribute to the baseball player.</td>
</tr>
<tr>
<td>c. The object’s meaning is an implicit, emic reality rooted in experience.</td>
<td><em>Perspective 1:</em> An anthropologist observes a farmer using a hoe and recognizes the agricultural function of the tool. While the function can be inferred, the anthropologist observes nothing more about the farmer’s cognitive connection to the hoe.</td>
</tr>
<tr>
<td></td>
<td><em>Perspective 2:</em> The farmer has a memory of inheriting the hoe from his father-in-law during a dowry ceremony. He associates it with the mechanics of cultivation but it also symbolizes his obligation to provide for his family.</td>
</tr>
</tbody>
</table>

The Plurality of Function and Meaning

Individuals experience the intangible social world through tangible materials. For example, the farmer experiences family bonds through the use of his hoe (refer to example c” in Table 2). However, as Shackel and Little (1992:8) stress, “goods are not equally meaningful in all times and places.” Every person approaches the social world from a unique perspective and
perceives the tangible world according to that perspective. The plurality of perspectives makes it possible for objects to have multiple functions and meanings.

Although the meanings are independent, they are related through a network of memories and through repetition of the word within a semantic context. Polysemy is a linguistic phenomenon wherein a single word has multiple, semantically-rooted meanings (Evans 2005: 33-38). When applied to the study of material objects, polysemy is helpful for conceptualizing function and meaning. The structure of a polysemous word (for example, the sound and the semantic or etymological network) is unchanging, but multiple meanings for the word may emerge through use and repetition. For example, one can define a table as a piece of furniture with a horizontal plank and one or more supporting legs. The same person may also recognize a table as a dataset of facts or figures organized into columns and rows. In substance, the furniture is independent from the dataset, but in meaning the word “table” is equally valid in both contexts. Although the modern contexts appear unrelated, they are etymologically rooted in the Old English for a flat slab of stone or wood (“table” in Merriam-Webster 2014). “Table” became a polyseme as people began to repeat the word with the understanding that its meaning varied depending on the context.

In a conventional sense, polysemy describes a linguistic phenomenon, but if we recognize objects as meaningful, we can also attribute polysemy to material culture. The elemental properties of an object are unchanging, but people may utilize, modify, and exchange the object, thereby transforming its utility and/or symbolic significance. These transformations do not necessarily dismiss previous notions of the object. New meanings and functions nestle into an existing semantic network and even coexist with previous notions.
In addition to verbal and visual cues, the Calusa experienced Spanish semantic networks through material culture. Contact between the two parties created an environment where exotic materials were not only introduced to Calusa culture but also incorporated politically, economically, and ideologically. Whether they were acts of trade or salvage, these material exchanges exposed Spanish items to a multitude of functions and meanings; and each exposure expanded the semantic networks of the materials. Behind every exchange was an intention, political, personal, or otherwise. Alas, intention does not make an indelible mark on the objects (if it did, archaeology would be much simpler and far less contentious). Objects do, however, embody practices. We can tack these practices together in order to see the macro-process. From the macro scale, the intentions, beliefs, and attitudes of the Calusa come into focus.

Shipwreck and Salvage as Processes

Depicting the shipwreck as a database, Larry Murphy (1983:66-67) observed,

In these instances, a viable, functioning social group and its material was frozen in time by disaster. The full spectrum of the group’s activities at the location, represented by the material culture in use at the time, is deposited as a discrete unit… It becomes apparent that a shipwreck as an archaeological entity has special value because of its distinctly synchronic nature.

Shipwreck archaeologists have an exclusive vantage point from which to examine human behavior. Some have referred to the shipwreck as a time capsule, a concentration of materials embodying a culture at a precise moment in time (Lenihan 1974:32). Murphy (1983:66) revisits the analogy, noting that while deliberate human effort buries a time capsule, disaster is usually the mechanism that sinks a ship. To reflect on shipwrecks in terms of crisis and devastation is not
disingenuous. Shipwrecks involved terrible suffering, death, and loss of property. But it is important to recognize that the “disaster archetype” characterizes the synchronic perspective of a single group. Certainly, the candid maritime archaeologist would appraise a shipwreck as more of a fortuity than a disaster. And the material that equates to scientific data for the archaeologist was pure treasure to 16th-century salvagers. Perspective, as a principle, should not constrain the way we use shipwrecks to extract data. We can continue to use the data to illustrate human response to disaster phenomena, but we have to consider that vein as just one of many ways to conduct underwater archaeology.

Technically speaking, this thesis is not a study of shipwrecks. In fact, if methodology is the criterion, this thesis is a terrestrial project. The reality, however, is that the Calusas’ salvage activities were dependent upon the Spanish maritime landscape. The terrestrial provenience of salvaged goods is but one component in the examination of the greater historical process. That said, it is necessary to explore shipwreck from both the Spanish and the Calusa perspectives.

*Disaster First, Opportunity Second*

In his seminal book, *Maritime Archaeology*, Keith Muckelroy (1979:157) described a shipwreck as a single-deposition event whereby an assemblage of organized yet dynamic artifacts becomes an assemblage of static, disorganized artifacts. He postulated that natural transforms, such as perishable disintegration and seafloor movement, were important to the site formation process but distinct from the initial wreck event. He paid special attention to the natural “transforms,” which subsequently “scrambled” ship assemblages on the sea floor. Muckelroy was one of the first in the discipline to articulate the archaeological potential of shipwrecks and to approach underwater contexts with such attention to detail. Throughout the
1980s and 1990s, archaeologists and anthropologists (Watson 1983; Cockrell 1983; Ward et al. 1999) explored underwater site formation processes, drawing from the groundwork Muckelroy had laid.

Succeeding a generation of shipwreck research, Martin Gibbs revisited Muckelroy’s site formation model. He agreed that natural transforms impact site formation processes but argued that cultural transforms are equally influential “scrambling” devices (Gibbs 2003; 2006). Gibbs theorized that the wreck event, the cultural transforms, and the natural transforms are components of a greater process. He specifically focused on the progression of cultural transforms, outlining the behaviors which correspond to the following five phases: (1) pre-impact (includes the threat and warning phases), (2) impact (includes the decision to abandon ship or remain aboard), (3) recoil (includes repair, refloating, or establishment of a survivor camp), (4) rescue, and (5) post-disaster (Gibbs 2006: 7-13). In order to reveal more about cultural transforms, he found it useful to focus on crisis activities, especially those related to salvage and survival (Gibbs 2003:138).

Gibbs (2003:140) posited that in the event of disaster, a ship’s crew responds with predictable survival strategies. According to his model (Table 3), the first act of salvage occurs before or during the impact phase. This phase is when the crew recognizes that the vessel is in danger of damage or that it has already been damaged. Their response is to cut masts and jettison heavy objects. The next salvage phase involves gathering portable necessities in preparation for abandoning ship. Though the crew attempts to secure survival items, this phase may also involve indiscriminate retrieval of impractical items. The crew returns to the ship during the next phase in order to recover items need to construct a survival camp (cargo, minor structures, fixtures). After assessing the conditions of survival and stabilizing a campsite, the crew returns to the ship
for opportunistic and organized salvage. The aim of opportunistic and organized salvage is to collect items of value. These last two salvage phases may occur sporadically, cyclically, long-term, or short-term, depending on the condition of the vessel, the risks involved, and the accessibility.

TABLE 3
GIBBS’ FIVE PHASES OF THE WRECKING PROCESS AND SALVAGE STRATEGIES, ADAPTED FROM GIBBS 2003

<table>
<thead>
<tr>
<th>Wrecking phase</th>
<th>Salvage behavior</th>
<th>Purpose</th>
<th>Materials removed from the ship</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) Pre-impact</td>
<td>Jettisoning</td>
<td>To prevent damage to the ship</td>
<td>Masts, anchors, cannons, heavy cargo</td>
</tr>
<tr>
<td>(2) Impact</td>
<td>Jettisoning and Crisis salvage</td>
<td>To mitigate the effects of damage to the ship or to gather items related to survival</td>
<td>Cargo, small and readily-accessible items</td>
</tr>
<tr>
<td>(3) Recoil</td>
<td>Survivor salvage</td>
<td>To retrieve a wider range of items for survival</td>
<td>Food, water, tools, minor structures and fittings for housing construction</td>
</tr>
<tr>
<td>(4) Rescue- crew is removed from the survival situation</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>(5) Post-disaster</td>
<td>Opportunistic and Organized salvage</td>
<td>To retrieve useful or valuable items</td>
<td>Cargo, fittings, minor and major structural fixtures</td>
</tr>
</tbody>
</table>

Gibbs’s model is specific to crisis response and, therefore, relevant to the Spanish perspective. While this thesis focuses primarily on Calusa behavior, it is important to remember that in the context of Florida shipwrecks, Spanish crisis behavior preceded Calusa salvage. Whether the Spaniards engaged in all or one of Gibbs’s predicted salvage activities, their decisions and actions affected the disposition of the ship prior to the Calusas’ arrival at the wreck.
site. Thus, the post-disaster phase in Gibbs’s model is not exclusive to the survival experience of crewmembers. In the case of South Florida, the model extends to the Calusa, who were able to practice opportunistic and organized salvage in the wake of shipwreck disaster.

**Institutional Trade and Opportunistic Salvage as Processes of Obtaining Spanish Goods**

From the Calusa vantage, salvage was not a survival-oriented activity; rather, it was an alternative to the political, economic, and ideological parameters of a typical colonial encounter. Figure 3 compares salvage activity to institutional means of obtaining Spanish goods. The model demonstrates the accrual of synchronic decisions, actions, and events into diachronic processes. In this model, an individual creates an object for a specific function (to trade, to gift, to ship to the European market, etc.), thereby setting a specific process in motion. Human choices or natural occurrences subsequently determine the “direction” of each process. The processes then diverge as individual agents enact political, economic, or ideological strategies.

In scenarios A and B, the item is part of an intentional exchange between Spaniards and indigenous Floridians, but in Process C, the item becomes a Calusa possession sans Spanish intervention. In Process A, the item retains its original Spanish function and meaning as it enters the negotiation phase. In Process B, the function and meaning of the item transform when the extralocal group acquires it from the Spanish. The function and meaning of the item change once more when the extralocal group incorporates it into their negotiations with the Calusa.
Figure 3. Processes for the Calusa to obtain a Spanish item. (Figure by author, 2014.)
In the negotiation phases of A and B, the item is part of an intentional exchange between Spaniards and indigenous Floridians. When the Calusa recover the item from the shipwreck in scenario C, the item is not a fixture of intentional transfer; therefore, it does not involve concessions to Spanish expectations. In Process A, the item retains its original Spanish function and meaning as it enters the negotiation phase. In Process B, the function and meaning of the item transform when the extralocal group acquires it from the Spanish. The function and meaning of the item change once more when the extralocal group incorporates it into their negotiations with the Calusa. In the negotiation phases of A and B, the item solidifies a political, economic, or ideological contract, depending on the needs of those involved. When the Calusa recover the item from the shipwreck in scenario C, the item is not a fixture of intentional transfer; therefore, it does not involve concessions to Spanish expectations.

Examining each of the three sequences from a hypothetical vantage allows for a better understanding of the filters (Figure 4). Suppose that a Franciscan friar purchases a wooden crucifix from a Spanish artisan in Havana. He intends to take the crucifix to an indigenous community in Florida. He will use it to instruct the Indians in the Christian faith. On a functional level, the object is an instructional device. It symbolizes the mutual mission of the Crown and the Church to evangelize. The friar conceptualizes the crucifix as an intimate reminder of salvation, sacrifice, and Christian values, and he expects the indigenous converts to receive it with reverence. In Process A, the friar arrives at a Calusa community to deliver the crucifix. As the friar hands it to the Calusa chief, he assumes that the two parties are entering a negotiation in which the Calusa agree to practice Christianity. Regardless of the chief’s intention to convert or to reject Christianity, the crucifix transforms in both function and meaning at that moment of exchange. Now suspended in an indigenous context, the crucifix does not evoke the same
religious significance for the Calusa as it did for the friar. Perhaps the Catholic faith will become ingrained in Calusa consciousness through instruction, and they will begin to see the crucifix as a symbol of Christianity. However, such a transformation would involve a multi-generational process.

The life of the crucifix in Process B is similar to that of Process A, except for the primary negotiation between the friar and a non-Calusa chief. The friar assumes that the chief accepts Christian doctrine as he takes the crucifix. The intention of the extralocal chief is not necessarily important. It is more important to recognize that the object’s function and meaning transform as it becomes the chief’s possession. The secondary negotiation, which occurs between the extralocal agent and the Calusa chief, places greater distance between the object and its manufacture as a device for Christian instruction. When the extralocal chief approaches the Calusa chief with the object, it now complements a political exchange in an indigenous context.

Process C moves the crucifix through a distinct set of filters. In this scenario, the friar leaves Havana with the crucifix aboard a Florida-bound ship. The ship wrecks as it rounds the tip of Florida, drowning the crew and the friar. The Calusa chief receives news of a wreck event and sends a salvage party to the site. In a sense, the item in Process C has become a natural resource, collected as if it were any other terrestrial or marine supply. The chief’s salvagers recover floating debris, including the crucifix. The object is not entirely void of its former sociocultural context, because the Calusa associate the shipwreck with Spaniards. When the salvagers deliver the crucifix to the Calusa chief, it enters the indigenous context with two crucial ramifications: firstly, the friar’s expectations are entirely absent from this context; secondly, the object underscores the chief’s ability to gather exotic resources without the need to negotiate externally.
FIGURE 4. Processes for the Calusa to obtain a Spanish crucifix. (Figure by author, 2014.)
Every person manages the social world with a unique set of expectations and experiences (Hodder 1985:5). When the expectations and experiences of one party meet with those of another, the factions must negotiate in order to achieve a favorable outcome. An item that has filtered through Processes A or B is one whose meaning and function are bounded by colonial negotiations, but the item that filters through Process C exists beyond such a boundary. Process C highlights Calusan agency, rather than Spanish agency. Thus, Calusa salvage has the potential to reveal much about the indigenous practices that were affected—*not coerced*—by colonial encounters.

A synthesis of evidence and theory enables us to conceptualize the Calusas’ opportunistic practices as integral to their colonial experience. Radical post-processualists contend that symbolic interpretation is the only way to reach such experiences, and that material data are useless in detecting cultural contexts (Shackel and Little 1992:6). Strident processualists argue that material culture is too superficial to reify human experiences. The approach employed in this study recognizes that life is simultaneously symbolic and material. If processualism quantifies the material world and post-processual archaeology interprets the symbolic world, then a combination of both should allow for a more holistic understanding of the human experience.
CHAPTER IV.

METHODS

Building a Model for the Study of Salvage Behavior

The Calusa and the Spanish shared a colonial experience, but at the same time, each entity perceived the experience independently. They practiced discrete traditions and acted on their own intentions. The presence of salvaged goods on terrestrial sites represents the convergence of both Calusa and Spanish agency. Unlike the trade and gift goods sent for colonial negotiations, these objects were destined for European markets. Salvage behavior was a process of selecting and appropriating European culture on indigenous terms. There are myriad ways to investigate salvage behavior, but the primary aim of this research is to investigate whether or not salvage assemblages reveal patterns of the Calusas’ early colonial experience. Specifically, what Spanish materials were the Calusa selecting to incorporate into their existing material tradition, and for what reasons were they incorporating them? The following discussion proposes a model for organizing traditional Calusa material culture and salvaged material into a format that is appropriate for addressing these questions.

Reflecting on decades of archaeological work, Lewis Binford (2009:57) commented, “We are responsible both for the production of data… and for what we have to say about it in so far as we use it to implicate the past.” Binford championed data as the mainstay of archaeology throughout his career. He asserted that data collection leads to analysis, inspires interminable questions, and always returns to the original source of the data for answers.

Perhaps the greatest appeal of detailed, multi-scalar archaeology is its potential to produce raw data. This sort of archaeology provides an ideal backdrop for Binfordian analysis,
but the problem with unbounded data collection is that data must be made manageable before any implications can be made about the past. This particular study involves so many theoretical and methodological components—from practice theory to historical document analysis to artifact evaluation—that it needs incisive organization before it can produce meaningful results. The content of each chapter is relevant only if there is a structure to bind the concepts to one another. The following discussion attempts to structure Calusa salvage culture so that the archaeological and historical evidence lead to insightful conclusions.

Models serve not only to organize concepts but also to simulate conditions that would be impractical to create with experimentation. In the case of Calusa salvage, innumerable filters have created gaps in the archaeological contexts and historical documentation, and it would be impossible to recreate fully the conditions of an extinct chiefdom. Rather than forfeit to implausibility, conceptual relationships can be built in order to evaluate the available empirical knowledge. The model for this investigation is specific to salvage behavior in the 16th and early-17th centuries in South Florida. The implication is not that the model is irrelevant to any other time, place, or behavior, but that its assumptions are tailored to the Calusa for a specific time frame.

The underlying assumption of this study is that the Calusa incorporated Spanish-origin items from shipwrecks into their traditional assemblages. There is also the assumption that the Calusa salvaged and modified goods with functionality in mind. Even if salvage were indiscriminate, the salvagers intended every item to serve a Calusa function eventually. But before the item could serve a Calusa function, it underwent a process of incorporation (refer to “Processes for Calusa Chiefs to Obtain Spanish Goods” in Chapter III).
The process of incorporating Spanish-origin items entailed an assessment of the object’s physical form, a value judgment of its usefulness, and transference of the object from its shipwreck context to the Calusa context. Transference was not simply a matter of transporting the item off the wreck site. This sequence of decisions and actions, which resulted in each salvaged object being imbued with Calusa-specific utility. Whether the object became a tool, an ornament, or a ritual item, its utility was imposed, inferred, innovated, or invented from the existing Spanish material (Table 4). If the Calusa modified the Spanish material to imitate an item from their traditional assemblage, function was imposed. If the Calusa did not modify the item but assigned it a utility based on a correlation to an object from their traditional assemblage, function was inferred. If the Calusa modified the salvaged object into a non-traditional form, function was innovated. If the Calusa did not modify the item and assigned it a non-traditional utility, the function was invented.

Transference of function was not a spontaneous process, nor was the outcome random. Every decision and practice had roots in the indigenous material tradition. This investigation assumes that existing tradition informed whether a salvaged item became an homology, an analogy, an innovation, or a novelty in the Calusa context. In a biological context, an object is homologous to another if the same developmental module produces both objects. Therefore, homology does not refer to similarity of structure or function but to a shared developmental lineage (Wagner 2007:473). In this study the term describes an object that conforms to traditional Calusa material production, decoration, and function. An object is analogous to another if both of their traits are perceived as similar. Analogies are created based on comparisons of observed characteristics (Shelley 1999:582). In this model, an analogy is a Spanish-origin object that has a functional correlate in Calusa material culture. An object is a
novelty if it is unlike anything in the traditional Calusa assemblage. It does not fit the indigenous pattern of production or decoration, and the Calusa could not draw an analogical comparison of function from their traditional assemblage.

TABLE 4
MEANS OF TRANSFERRING FUNCTION FROM A SPANISH TO A CALUSA CONTEXT

<table>
<thead>
<tr>
<th>Function</th>
<th>Material Signature</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>Imposed</td>
<td>Salvaged item was modified to imitate a Calusa item</td>
<td>A gold coin hammered into a gorget form</td>
</tr>
<tr>
<td>Inferred</td>
<td>Salvaged item was not modified, and there was a Calusa correlate</td>
<td>A glass bead strung onto a shell bead necklace</td>
</tr>
<tr>
<td>Innovated</td>
<td>Salvaged item was modified, and there was no Calusa correlate</td>
<td>An iron nail hammered into a gaming piece for which a game is invented</td>
</tr>
<tr>
<td>Invented</td>
<td>Salvaged item was not modified, and there was no Calusa correlate</td>
<td>A brass sextant used to lead a religious procession</td>
</tr>
</tbody>
</table>

The Model: Homology, Analogy, Innovation, and Novelty as Criteria for Evaluation

The core of this model is grounded in a logical device called a conditional proof. A conditional proof is a deductive strategy whereby a *conditional* assumption proves an *antecedent* true, which necessarily leads to a *consequent*. The proof demonstrates that if an initial assumption were true, then a desired conclusion must also be true. In Figure 5, A is the *antecedent*, and B is the *conditional* in the first statement. In the second statement, B is the *antecedent*, and C is the *conditional*. The third statement proves the validity of the *consequent* (C) based on the validity of the first statement (A).
Conditional proofs are not designed to confirm absolute truths. Rather, they are used for reasoning through hypothetical circumstances, which would otherwise lack logical structure. This logical strategy is well suited for conceptualizing Calusa practices of appropriating Spanish items. The proof provides a way to relate observable characteristics (for example, object modification) to object functionality (Table 5). Using conditional reasoning, the following statements are held to be true: a homology had an imposed function, an analogy had an inferred function, and innovation had an imposed function, and a novelty had an invented function.

TABLE 5
OBJECT FUNCTIONALITY WITH RESPECT TO OBSERVABLE CHARACTERISTICS

<table>
<thead>
<tr>
<th>Modified</th>
<th>Not Modified</th>
</tr>
</thead>
<tbody>
<tr>
<td>Homology (function imposed)</td>
<td>Analogy (function inferred)</td>
</tr>
<tr>
<td>Innovation (function imposed)</td>
<td>Novelty (function invented)</td>
</tr>
</tbody>
</table>

1. A $\rightarrow$ B (A is true, and if A is true, then B is true)
2. B $\rightarrow$ C (If B is true, then C is true)
3. THEREFORE: A $\Rightarrow$ C
If the Calusa modified a salvaged item using traditional techniques, then a Calusa function was imposed on the material. If a Calusa function was imposed on the material, then the item was a homology. Therefore, homologies were salvaged objects with traditional modification.

If the Calusa did not modify a salvaged item but they had a functional correlate for that item, then a Calusa function was inferred from the material. If a Calusa function was inferred from the material, it was an analogy. Therefore, an analogy was an unmodified salvaged object with a Calusa correlate.

If the Calusa modified a salvaged item but they had no functional correlate for the new item, then a Calusa function was innovated for the material. If an innovative function was imposed on the material, it was an innovation. Therefore, an innovation was a modified salvaged object with no Calusa correlate.

If the Calusa did not modify a salvaged item and they had no functional correlate for that item, then a Calusa function was invented from the material. If a Calusa function was invented from the material, it was a novelty. Therefore, a novelty was an unmodified salvaged object with no Calusa correlate.

In sum, this model identifies four processes of incorporating Spanish items into an existing material culture. The Calusa imposed, inferred, innovated, or invented a function for each item as they incorporated it into an existing assemblage. With regard to archaeological remains, modification is diagnostic of a process whereby Calusa Indians perceived Spanish material as compatible with traditional manufacture and use. A Spanish-origin object without modification was either similar enough to a Calusa correlate to be a functional proxy or so unique that a utility had to be innovated from or invented for the object.
Anthropologists have used materiality to examine culture contact scenarios. In particular, Quimby and Spoehr (1951) categorize museum collections on the basis of function and form in order to infer acculturation phenomena. This model departs from the arguably outdated concept of “acculturation,” which tends to neglect the bi-directionality of culture contact. Rather than construe the Calusa in opposition to a dominant Spanish culture, this model examines Calusa processes of object modification as interactive and integrative. In this study, homologies, analogies, innovations, and novelties were the result of imposition, inference, innovative imposition, and invention, respectively. This investigation tests whether these three categories are appropriate for evaluating Calusa agency in the salvage of 16th- and early-17th century Spanish shipwrecks.

Testing the Model

Investigating Calusa salvage culture began with assessing the totality of the materials available to salvagers. As Muckelroy, Gibbs, and others have demonstrated, a shipwreck filters through natural and cultural transforms (for instance, the ship loses superstructure, fittings, cargo, or crew). It is possible to generate models for these generic filters, but there are unique events and processes that cannot be modeled realistically for each shipwreck. Thus, it is not practicable to reconstruct a specific shipwreck assemblage exactly as a salvaging party would have encountered it. This investigation uses historical documents to characterize the cargo assemblage of a floating vessel and terrestrial archaeology to determine the availability of materials after a wrecking event. The terrestrial component examined in this study reflects wrecking processes, Calusa behaviors, preservation and excavation biases, and numerous other
filters. The two lines of evidence—history and archaeology—do not necessarily corroborate one other, but they do compliment each other.

Historical Methods

The historical component of this thesis relied on documents from the Archivo General de Indias (General Archive of the Indies or AGI) and the Archivo General de Cámara de Comercio (General Archive of the Chamber of Commerce) in Seville, Spain. In addition to these primary repositories, ethnohistorian John Worth’s personal microfilm copies of AGI documents added to the textual data. The documents included service records of early Spanish explorers, letters, reports, memoirs, trade lists, and shipping lawsuits. In addition to substantiating the history chapter in this thesis, these colonial records provided the raw data that made it possible to synthesize typical Spanish trade assemblages for Florida.

Primary documents provided the foundation to characterize the types of materials that the Spanish government funneled into Calusa territory during the late-16th and early-17th centuries. This thesis was not designed to evaluate “sanctioned” goods, but it was necessary to distinguish trade and gift assemblages from shipwreck assemblages. This distinction was crucial in order to establish a standard for including items in the artifact evaluation. A sample of AGI gift and trade lists provided data on the “sanctioned” items circulated in Calusa and extralocal communities. John Worth supplied microfilm copies of trade and gift lists from the Contratación section of the AGI. He obtained the microfilm during research trips to Seville, Spain. As of 2014, copies of the microfilm are held in the University of West Florida Anthropology department. After reviewing the original microfilms, I opted to use Worth’s analysis of the raw data. Worth provided a table of the data, which was condensed for presentation in this thesis.
A preliminary review of documents in the Spanish archives revealed that the cargoes of government *flotas* were registered differently than those of privately-owned ships. A search for 16th-century Florida in the *Archivo General de Cámara de Comercio* supplied a list of lawsuits and insurance claims for private merchant ships sailing to Seville with New World goods. Although these lawsuits included cargo inventories for insurance claims, they were not complete ship registries. In contrast, *registros de venida*, filed at the AGI, were extensive cargo inventories. For this reason, only official government ship registries were consulted. Because of time constraints, it was not possible to consult original ship registries from the AGI. Instead, registry data was extracted from secondary sources.

Archaeological Methods

While the certainty of salvage could not be determined for the objects evaluated, all objects are representative of materials that could have been salvaged from Spanish ships during the 16th and 17th centuries. That is, the artifacts in the sample were present on Spanish ships but were not present in trade and gift assemblages. This evaluation did not investigate the artifacts in order to establish an object’s relationship to a specific shipwreck. The sample of Spanish-origin items was generated as a requisite for testing a model of Calusa salvage culture.

The Florida Museum of Natural History (FLMNH), University of Pennsylvania Museum of Archaeology and Anthropology (UPMAA), the South Florida Museum (SFM), and the National Museum of the American Indian (NMAI) house the artifacts contained in the evaluation sample. The artifacts, excavated and looted from Calusa sites since the 19th century, were analyzed previously and are now curated at said institutions. Given the natural and cultural disturbances to Calusa sites, it would be difficult—if not impossible—to find a substantial
sample of salvaged items with contextual integrity. Therefore, the evaluation was designed not to require exact provenances for the specimens. Descriptive data was extracted from publications about the museums’ collections. Ryan Wheeler’s (2000) “Treasure of the Calusa” provided the information for the artifacts housed at UPMAA and NMAI. Laura Branstetter’s (1995) “The Montague Tallant Collection of Historical Metal Artifacts” provided the information for SFM and FLMNH artifacts, excluding metal tablets. “Ceremonial Tablets and Related Objects from Florida” by Allerton et al. (1984) provided the analysis of metal tablets. The artifacts were organized into functional categories, material types, and modification techniques based on the analysis summaries in these publications. The artifacts were then classified as correlates or non-correlates of traditional material culture and, finally, identified as homologies, analogies, innovations, or novelties.
CHAPTER V.
EVALUATION OF ARTIFACTS AND DOCUMENTS

The requisite for testing the homology/analogy/innovation/novelty model is to identify the availability of Spanish goods within Calusa communities and to generate a basic understanding of traditional Calusa goods. Historical documents help distinguish salvaged items from materials exchanged during colonial encounters. Specifically, trade lists and shipping records outline an appropriate artifact sample. The artifact evaluation is based on textual data as well as an awareness of traditional Calusa material culture.

Evaluation of Trade and Gift Lists

Trade and gift lists reported the movement of Spanish-origin objects into indigenous communities. Spanish officials recognized that material exchange facilitated effective diplomacy, and they were careful to regulate indigenous access to European goods. If European items circulated freely, their values might diminish the diplomatic power of the Spanish negotiator. An important aspect of regulating circulation was to keep meticulous records on the assemblages destined for indigenous communities. Today, these records offer a way to determine if a Spanish-origin item made its way to Calusa territory via direct contact or through shipwreck salvage.

Whether the trade/gift assemblage accompanied a religious, political, or reconnaissance expedition, it conformed to a standard of trinkets and low cost fabrics, garments, and tools. It puzzled, albeit pleased, the Spaniards that the Calusa valued cheap items. For example, Solís de Merás scoffed that one Indian relinquished half a bar of silver for a pair of scissors during the
first Menéndez visit to Carlos (Worth 2014:247). Menéndez recognized that he could use trinkets such as beads, knives, bells, mirrors, axes, machetes, and clothing to trade with the Calusa. He also learned how to use goods to maintain the upper hand in tense situations. When Menéndez lured the chief and his attendants aboard his brigantine and lifted anchor, the Calusa party grew agitated. Menéndez offered the entourage with a haul of gifts, and they were placated (Worth 2014:245-249). From the Adelantado to the common soldier, Spaniards recognized their gift giving strategy as a diplomatic advantage and maintained a standard assemblage to offer to indigenous communities in South Florida.

The documents from which the data derive were filed in Contaduría legajos 947, 957, 950, 951, and 958 of the AGI. These accountancy files list the quantity, quality, and recipient of each supply taken to indigenous territory. A random sample of accounts was compiled from Contaduría to represent the years 1595, 1598-1600, 1602, 1603, 1611-1614, and 1616. Table 6 summarizes the data. The table organizes trade and gift supplies into five categories: clothing, raw metal, tools, cloth, and personal items. “X” indicates that the particular item was present in trade/gift lists for the specified years.

The accounts were consulted in order to characterize typical trade and gift assemblages, not to compute the totality of materials funneled into Calusa territory. In addition, the sample is a small proportion of all records kept for the late-16th and early-17th centuries. Furthermore, the sample set is incomplete in a quantitative sense, because it does not account for every year between 1595 and 1616. Therefore, a quantitative analysis of the sample would not reveal the totality of Spanish goods funneled into indigenous communities during the twenty-one-year
span. The qualitative analysis in this study merely represents that particular items would have been present in a Spanish trade assemblage.

**TABLE 6**
**TRADE AND GIFT SUPPLIES, BASED ON CONTADURÍA 1595-1616.**

<table>
<thead>
<tr>
<th></th>
<th>1595-1600</th>
<th>1601-1610</th>
<th>1611-1616</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Cloth</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>lining</td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>linen thread</td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>fine canvas</td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>embroidery cloth</td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>linen from India de Portugal</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>household thread</td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>serge</td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>sail canvas</td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>silk ribbons</td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>glaze-colored linen</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>coarse cloth</td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>dieziocheño cloth</td>
<td>X</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>fine cloth</td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>cotton strips</td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>low quality cloth from Avila</td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>linen from Rouen</td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>coarse sackcloth</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>fine sackcloth</td>
<td></td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>silk</td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>natural-colored cloth</td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>taffeta</td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td><strong>Tools</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>axes</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>hoes</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>adzes</td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>knives (singular)</td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>knives (pairs)</td>
<td>X</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>large knives</td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>cheap knives</td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>scissors (pairs)</td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>polearms</td>
<td></td>
<td></td>
<td>X</td>
</tr>
</tbody>
</table>
TABLE 6
TRADE AND GIFT SUPPLIES, BASED ON CONTADURÍA 1595-1616.

<table>
<thead>
<tr>
<th></th>
<th>1595-1600</th>
<th>1601-1610</th>
<th>1611-1616</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Personal items</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>silk buttons</td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>little bells</td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>necklaces</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>mirrors</td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td><strong>Clothing</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>shirts</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>short capes</td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>white blankets</td>
<td></td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>congas blankets</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>fine blankets</td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>mestiza blankets</td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>linen doublets</td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>fine canvas doublets</td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>glazed linen doublets</td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>fine wool stockings (pairs)</td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>silk stockings (pairs)</td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>medium-quality hats</td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>fine hats</td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>dresses</td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>worsted dresses</td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>common cloth dresses</td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>dresses of dieziocheño cloth</td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>shoes (pairs)</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td><strong>Metal</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>steel (pounds)</td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>lead (pounds)</td>
<td></td>
<td></td>
<td>X</td>
</tr>
</tbody>
</table>

Although the sample set is fragmentary, it illustrates a trend that is relevant to understanding the nature of Spanish-Calusa encounters. Specifically, a temporal analysis reveals diversification of goods over time. Between 1595 and 1600, the accounts listed just 6 bolts of
sackcloth, 1 white blanket, and 86 tools. By 1611, cloth varieties grew to include finer fabrics, such as silk, ribbons, linen, and taffeta, as well as finished garments. Shirts, doublets, stockings, hats, dresses, and shoes were introduced with increasing frequency as well. Along with cloth and European style clothing, tool varieties were diversified to include adzes, knives, scissors, and polearms. Personal items also began to appear on trade lists in 1602. By 1616, the assemblages had grown in such volume and diversity that two trade lists for that year totaled nearly 1,000 units of cloth, 459 items of clothing, 4 pounds of raw metal, over 4,600 personal items, and 289 tools. If these temporal data reflect the nature of trading and gifting in any way, they imply that the Spanish intensified their focus on equipping trade and gift assemblages.

The data also reveals that in spite of the trends in diversification, the Spanish furnished their trade and gift assemblages with consistency. Table 6 demonstrates that if an item appeared on one trade/gift list, it was generally present on future lists. Assemblage consistency is significant for the artifact evaluation in this study, because it helps distinguish trade/gift goods from salvaged goods. The documents helped to conclude that cloth, finished garments, raw steel, raw lead, tools, mirrors, buttons, and bells could not be included in the artifact evaluation of this study. The consistent register of such items implies that their presence in the archaeological record represents direct colonial encounters, rather than shipwreck salvage.

Evaluation of Shipping Records

Shipping records reflect the official movement of goods between Spain and the colonies. When merchants and royal companies loaded their goods in American ports, accountants documented the quantitative and qualitative data of the freights. For the protection of all shipping parties and in response to smuggling operations, accuracy was paramount in drafting such
records (Arnold and Weddle 1979:63-75). The documents ensured safe delivery of merchants’ goods and allowed shipmasters to claim responsibility only for the cargo consigned to their vessels. Because of the scrupulous attention to detail, it is possible to reconstruct cargo loads of Spanish colonial vessels.

For transatlantic ships upwards of 200 tons, registries might contain hundreds of itemized entries. It took weeks, in some cases, for shipmasters to compile these extensive documents (Arnold and Weddle 1979:22). Transcribing and analyzing a complete shipping registry for one of these vessels would result in a separate project altogether. Alternatively, this thesis extracts shipping data from a registry previously transcribed and translated for J. Barto Arnold III and Robert S. Weddle’s (1978) *The Nautical Archaeology of Padre Island*. The publication features a summary of the 1554 registry for *Santa María de Yciar*, a vessel that wrecked on a voyage from Mexico to Spain.

*Santa María de Yciar* was the smallest of four ships in a transatlantic fleet carrying American products, bullion, and coins minted in Mexico City. *Santa María de Yciar* alone was laden with over 15,000 pounds of precious metals wrapped in cloth and packed into wooden boxes (Arnold and Weddle 1978:21-22). The vessel departed Port San Juan de Ulúa in Veracruz with the fleet in April of 1554. The fleet was to regroup in Havana and sail north through the Florida Straits, but a storm overtook the ships, driving three of them north along the coast of Texas. One ship, *San Andrés*, escaped the storm badly damaged; but the others, including *Santa María de Yciar*, ran aground on a barrier reef near modern-day Corpus Christi, Texas. Royal salvagers were dispatched to locate the three ships and rescue cargo and survivors. The salvagers reported very few survivors, and modern excavations revealed that the salvagers failed to recover all precious cargo (Arnold and Weddle 1978:37, 365-373).
Arnold and Weddle’s (1978:350-359) register summary is a virtual reconstruction of the cargo aboard Santa María de Yciar. A team of researchers located the original register in Contratación 2490 and 1788 in the AGI. The transcribed and translated summary details 243 individual shipments of precious metals and luxury products from South and Central America. Between late February and early April, shipmaster Alonso Ojos worked with the ship’s owner and a royal notary to draft the list (Arnold and Weddle 1978:22). Table 7 provides an itemized summary of each product and its corresponding volume.

It is possible to identify the types of materials present on a typical Carrera ship en route to Spain using Santa María de Yciar as a reference. The vessel carried standard forms of silver and gold from Mexican mines, including oro común (common gold), oro que corre (“gold that flows”), tepuzque (a crude coinage made of a copper/gold alloy), ducados (ducats), tostones (4-real coins), maravedís (smallest unit of real coins) and bullion. Shipments of animal products included cochineal, a red dye produced from dried cactus-eating insects; wool; hides; and silk. Sugar, spice, liquidambar and anime perfumes, tacamahaca balm, and feathers comprised additional luxury cargoes (Arnold and Weddle 1978:20-28). One cannot assume that these materials were present on all Carrera ships. However, Santa María de Yciar was a government-sponsored vessel conformed to shipping standards of the Casa de Contratación. Alejandro del Pino de la Fuente and Cesar García’s (1996) summary of Carrera inventory suggests that the cargo aboard Santa María de Yciar was, indeed, typical for a 16th-century merchant ship.
TABLE 7
1554 CARGO INVENTORY FOR SANTA MARÍA DE YCIAR, ADAPTED FROM ARNOLD AND WEDDLE 1979

<table>
<thead>
<tr>
<th>Product</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gold</td>
<td>1,148 pesos</td>
</tr>
<tr>
<td>Silver</td>
<td>38,490 pesos + 20,316 marks</td>
</tr>
<tr>
<td>Ducats</td>
<td>250</td>
</tr>
<tr>
<td>Maravedíis</td>
<td>706.510</td>
</tr>
<tr>
<td>Cochineal</td>
<td>20,654 pounds</td>
</tr>
<tr>
<td>Liquidambar resin</td>
<td>8,400 pounds</td>
</tr>
<tr>
<td>Wool</td>
<td>3,201 pounds</td>
</tr>
<tr>
<td>Cow hides</td>
<td>1,226</td>
</tr>
<tr>
<td>White sugar</td>
<td>1,250 pounds</td>
</tr>
<tr>
<td>Silk Thread</td>
<td>143 pounds</td>
</tr>
<tr>
<td>Silver vessels</td>
<td>5</td>
</tr>
<tr>
<td>Beds</td>
<td>greater than 3</td>
</tr>
<tr>
<td>Anime resin</td>
<td>150 pounds</td>
</tr>
<tr>
<td>Sarsaparilla</td>
<td>1 barrel</td>
</tr>
<tr>
<td>Tacamahaca resin</td>
<td>46</td>
</tr>
<tr>
<td>Items made of feathers</td>
<td>Unspecified</td>
</tr>
<tr>
<td>Bundle of letters</td>
<td>1</td>
</tr>
<tr>
<td>Items of the deceased</td>
<td>32</td>
</tr>
</tbody>
</table>

The registry for Santa María de Yciar reflects the assemblage of the 16th-century ship as it left port, rather than the ship as it wrecked. Wrecking processes filtered ship contents as the crew jettisoned cargo and collected personal items. If the crew survived, its members might have returned to the wreck site to recover valuable objects. At the same time, tides, shifting sands, and decomposition filtered the ship’s contents naturally. Perishable items may have been absent entirely by the time Calusa salvagers arrived at the wreck site. Silver, gold, and other metals had a greater chance of surviving natural filters during and after wreck events. In addition to nonperishable cargo, Calusa salvagers might have encountered unregistered items such as superstructure, anchors, nails, spikes, chains, armaments, cooking gear, and onboard equipment (Arnold and Weddle 1978:224-261).
Synthesis of Traditional Calusa Material Culture

Recognizing all processes by which indigenous communities obtained Spanish materials is essential for understanding Calusa salvage behaviors. It is also important to be aware of the traditional assemblages into which Spanish materials were incorporated. In this thesis, “traditional” material culture refers to items that were manufactured and used prior to Spanish contact. The following discussion is a typological synthesis of the traditional Calusa assemblage. The synthesis is based on artifact collections from Mound Key (8LL2), Key Marco (8CR48), Pineland (8LL33, 8LL37, 8LL1612), Buck Key (8LL55), Josslyn Island (8LL32), Collier Inn Site on Useppa Island (8LL51), Cash Mound (8CH38), and sites in the Okeechobee and Kissimmee Basins (Figure 6). The chronologies for these sites range from Archaic (10,000-3,000 B.C) to Caloosahatchee V (A.D. 1513-1750), but this synthesis concentrates on Caloosahatchee technologies and styles prevalent immediately before the Spanish arrival in Florida.

Traditional Ornamental Objects

This synthesis addresses ornamental and utilitarian artifact classes. The subcategories for ornamental objects are divided into beads, disks and cones, pendants, pins, tablets, and effigies. The utilitarian objects are divided into cutters, scrapers, and drills; hammers and pulverizers; and subsistence utensils. Calusa scholars recognize the subcategories used in this synthesis; however, the majority of their literature structures artifact analysis according to material type, not functional categories. The common practice in South Florida archaeology has been to classify shell, bone, wood, stone, and plant objects on a site-by-site basis. Only a few scholars, such as Widmer (1988) and Marquardt (1992b), have attempted to synthesize material culture of the entire Caloosahatchee region.
FIGURE 6. Calusa sites in the vicinity of Charlotte Harbor/Estero Bay. (Figure by author, 2014)
Beads

Traditional beads are not typically abundant on Calusa sites, and it is unknown whether the scarcity of beads represents poor preservation or a true scarcity of beads in the Calusa assemblage (Marquardt 1992a:214). Due to such scarcity and to insufficient contextual information, bead function is somewhat enigmatic. There is clear evidence that they were strung onto necklaces. Strings of shell beads have been recovered from grave mounds east of Lake Okeechobee, demonstrating more than one instance in which they served ornamental functions (Wheeler 2000:47). Occasional association with fishing implements have led some archaeologists to believe that beads were used for fishing tackle, but no direct association exists (Griffin 1985:72).

Willey and Goggin identified several varieties of shell bead during their mid-20th-century work on Belle Glades and Caloosahatchee mound sites. Using their data, Marquardt (1992a:215) identified eight bead varieties within the Calusa region. He referred to these distinct varieties as seed, disk, square, tubular, expanded ends, faceted, irregular, and massive (Table 7). Marquardt’s categories remain standard for bead identification in the Caloosahatchee region.

Shell was the most common material type for traditional Calusa beads, but artisans also carved them from bone, stone, and coral. In his analysis of the Johnson/Wilcox Collection from Mound Key, Ryan Wheeler (2000:47) identified twenty-two shell beads, all of which were disk and tubular varieties. He identified only one spherical coral bead and two carved bone beads in the collection. One of the bone beads was carved out of a mammal bone, incised, and inlaid with copper; the other bead was cut from the shaft of a hollow bird bone, polished, and then incised. There is uncertainty as to manufacture period of these beads. Copper work predates Spanish contact in pockets of Florida, so its presence is not diagnostic of a particular period (Wheeler
2000:33-35). A total of four bone disk and tubular beads were recovered during excavations at Josslyn Island and Buck Key (Walker 1992b:237). Excavations at the Pineland Site Complex have recovered very few bone beads. Robert Austin (2013:672) notes only two examples of stone beads in the Pineland collection, one of which was a fossilized bone disk and the other, a small ochre bead.

**TABLE 8**
MARQUARDT’S CLASSIFICATION OF CALUSA SHELL BEADS

<table>
<thead>
<tr>
<th>Variety</th>
<th>Description</th>
<th>Diameter</th>
<th>Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>Seed</td>
<td>Round with a small hole</td>
<td>2 to 3 mm</td>
<td></td>
</tr>
<tr>
<td>Disk</td>
<td>Flat with smoothed sides</td>
<td>3 to 12 mm</td>
<td>1 to 6 mm</td>
</tr>
<tr>
<td></td>
<td>diameter &gt; length</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Square</td>
<td>Rectangular</td>
<td>4 to 9 mm</td>
<td>7 to 10 mm</td>
</tr>
<tr>
<td>Tubular</td>
<td>Cylindrical</td>
<td>4 to 6 mm</td>
<td>8 to 19 mm</td>
</tr>
<tr>
<td></td>
<td>Length &gt; diameter</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Expanded Ends</td>
<td>Cylindrical with flared ends</td>
<td>7 mm</td>
<td>21 to 45 mm</td>
</tr>
<tr>
<td>Faceted</td>
<td>Octagonal, roughly shaped</td>
<td>9 mm</td>
<td></td>
</tr>
<tr>
<td>Irregular</td>
<td>Roughly rectangular</td>
<td>14 mm</td>
<td>16-17 mm</td>
</tr>
<tr>
<td>Massive</td>
<td>Abnormally “large and heavy”</td>
<td>26 mm</td>
<td>43 mm</td>
</tr>
</tbody>
</table>

Bead manufacture involved reductionist techniques regardless of the material type. The artisan cut, carved, or chipped the original material and finished the outer surface with buffing, incising, or other embellishments. Collumela shell provided the most common material for shell bead manufacture. Collumelas are so-named for the central “pillar,” which provides vertical structure for the interior of whorled shells such as conchs and lightning whelks (Figure 7).
Wheeler (2000:47) observed that the Mound Key shell beads were manufactured by chipping shell whirls into disks or cylinders blanks, perforating the central hole, and grinding or polishing the surface. Coral, bone, and stone beads were likewise cut, perforated, and polished.

![Collumela shells](image)

**FIGURE 7.** Collumela shells. (Figure by author, 2014.)

**Disks and Cones**

Like beads, disks and cones are an enigmatic artifact class of the traditional Calusa assemblage. Disks were flat and circular with one or more central perforation. They were cut or chipped from bone and shell, perforated, polished, and then embellished with incised designs, scalloped edges, and other stylistic features (Branstetter 1995:294-295). Shell disks were typically flat, although some exhibited the contours of their manufacturing material. A possible gorget from Mound Key was large enough (54 mm in diameter, 2 mm thick, and 14.5 g) that it retained the concavity of the *Busycon* whirl from which it was cut (Wheeler 2000:42). Cones were similar to disks in plan view, but rather than lying flat in profile, they tapered upward toward the center.
Although the precise function of disks and cones is unknown, it is likely that they were ornamental objects. European colonists reported that chiefs in eastern Florida hung large disks around their waists and throats and strapped to their elbows and knees. Laura Branstetter (1995:295) suggests that Calusa disks were used in a similar fashion to signify status or rank. William Marquardt (1992a:214) agrees that most disks were ornamental but posits that larger ones may have been used for serving food or mixing paint.

**Pendants**

Pendants were plain or stylized pieces of jewelry, which included suspension features. In order to suspend the pendant, the wearer laced cordage through a perforation in the object or wrapped it around a groove cut into the object. Many Calusa pendants are only identified tentatively, because it can be difficult to distinguish them from traditional fishing implements. It is possible that some pendants were used as fishing implements for hook and net fishing but subsequently adopted as personal adornments (Wheeler 2000:45-46).

There are unmistakable examples of ornamental pendants. The Pineland Collection, for instance, contains three bone pendants: one carved from a crocodile tooth and two spatulate forms carved from mammalian bone (Patton 2013b:726). Pendants were carved from stone, shell, and ceramic sherds into a variety of forms, including almond-shaped, kite-shaped, and double-grooved cylinders. Like bead production, traditional pendant production involved a reductionist technique. The manufacturer chipped or cut the original material to shape and then polished the surfaces.
Pins

Pins of various sizes and styles were manufactured for personal use. Karen Walker (1992b:232) refers to historical documentation and interpretations of non-Calusa pins to demonstrate that bone pins from Josslyn Island, Buck Key, and Cash Mound were probably used to attach feathers onto headpieces or to adorn hair. Manufacturers typically produced pins by carving deer metapodials into pointed shafts and finishing one end with a peg, spike, articular, or t-shaped head (Walker 1992b:232). One unique pin from Mound Key (Figure 8) was cut from bone and finished with a carved effigy of a bird with outstretched wings (Wheeler 2000:32).

![Figure 8. Bird effigy pin. (Figure by author, 2014.)](image)

Tablets

Decorated wood and stone tablets were ubiquitous in southwest and south-central Florida, but they were highly concentrated in the Kissimmee/Okeechobee region. Allerton et al. (1984) provide perhaps the best discussion of manufacture, use, and deposition of tablets in South Florida. They describe the typical tablet form as two flat panels—one rectangular and the other...
spatulate—joined with a thinner “waist” (Figure 9). Traditional tablets were cut from wood or stone and decorated with indistinct zoomorphic and celestial motifs. Designs could be carved, incised, or painted on the material’s surface (Allerton et al. 1984:5). The wooden tablets from Key Marco, for instance, exhibited multichrome woodpecker, dolphin, and duck paintings on their surfaces (Wheeler 2000:130-148).

![Figure 9](image)

**FIGURE 9.** Two-piece tablet. (Figure by author, 2014.)

The most common iconography on stone and wood tablets were Mississippian sun and circle motifs and zoomorphic effigies exclusive to Florida cult symbolism (Allerton et al. 1984:22). Combinations of these motifs imply that tablets served to enhance a cultic, ceremonial belief system. While it is unclear how traditional tablets fit into Calusa ritual precisely, George Luer (1994:182) notes that many 17th and 18th-century tablets from the Kissimmee River Basin were associated with burial caches. This distinct form of deposition may indicate that they were personal items interred with the individuals who owned them. Allerton et al. (1984:10) believe
they functioned as central pendants for beaded necklaces, because the majority of them exhibit suspension holes.

**Effigies**

Zoomorphic motifs were featured not only in tablet designs but in the form of effigies as well. Stone, wood, and bone served as the typical mediums for these stylized representations of woodpeckers, waterfowl, and other local fauna. Manufacturers shaped their raw material of choice with woodworking tools such as shark teeth and adzes. The object was polished and then painted or incised with motifs (Wheeler 2000:35). Widmer (1989:179) and Wheeler (2000:147) posit that the small effigies incorporated into pins and pendants were used for personal adornment. Larger effigies likely served as cultic figureheads and masks.

At Key Marco, Cushing recovered several large wooden effigies, including a six-inch seated cat figurine and deer, wolf, and alligator figureheads. These effigies were cut from cypress, pine, and mangrove and finished with polishing and polychrome paint (O’Connor1995:137-140). It is widely accepted that these life-sized carvings served as ceremonial idols or masks, although some scholars posit that the figureheads were mounted on ceremonial staffs or canoe prows (Clark 2013:621-640).

Masks comprise an impressive subcategory of Calusa effigies. Fr. Rogel observed that the residents of Carlos incorporated masks into religious ceremonies during the 16th century (Hann 1991:247, 287-288). Radiocarbon dates for Key Marco masks indicate the proto-Calusa cults utilized them as early as the 8th century (Clark 2013:649). The Pineland Collection contains a rare example of one such ceremonial mask. In 1971, two bottle collectors stumbled upon the figurehead half-buried at the base of a Pineland mound (Clark 2013:621-622). Curators
at the Florida Museum of Natural History analyzed the 27.4 cm-long figurehead and determined that the cypress heartwood carving was the upper half of a mechanical bird head dated to the same period (8th century A.D.) as the Key Marco masks (Clark 2013:649). Perforated holes along the bottom edge of the carving would have allowed it to be hinged to a lower mandible. A notch at the rear of the hollowed “cranium” allowed the wearer to mount the figurehead on a headpiece (Clark 2013:622). The complete figurehead would have enabled the wearer to mimic waterfowl movement during cultic performances.

**Summary of Traditional Ornamental Objects**

Calusa ornaments, personal items, and ceremonial objects engendered life in southwest Florida. Individuals were connected to their environment through personal items made of local materials. Not only were these items sourced from the Caloosahatchee region, they were often stylized to evoke local wildlife. Ornament production involved reductionist techniques such as carving, cutting, and chipping the raw material. Finishing techniques were simple, almost always involving polishing of the objects’ surfaces and occasionally employing etching or painting. In sum, Calusa ornaments exhibited economy and competence in local resource exploitation.

**Traditional Utilitarian Objects**

**Cutters, Scrapers, and Drills**

Calusa cutting technology consisted of shell, lithic, and bone resources. The availability of raw materials in south Florida imposed significant limitations on the cutting tool inventory. In most regions of North America, pre-Columbian populations relied on lithic for tool production.
Chert was especially important, providing durable edges for hunting, butchering, and working bone and other raw materials. The Calusa lacked direct access to chert outcrops, thus necessitating the importation of the raw material or pre-made tools. Robert Austin (2013:657-659) suggests that, for the Calusa, the scarcity of local chert resulted in limited and “expensive” lithic tool inventories.

Despite the scarcity of lithic resources, evaluation of the Pineland collection yielded 131 examples of chert bifaces, microliths, and other siliceous flakes (Austin 2013:662). Bifaces were manufactured by core flaking and applying thermal stress. Wear patterns indicate that they functioned as scrapers, perforators, drills, knives, and saws (Austin 2013:663-665). Like bifaces, microliths were manufactured via core reduction. Microlith production was a matter of snapping blade or flake fragments and leaving the sharp edges unmodified. These small blades were used for scraping, engraving, shredding, drilling, and perforating. It appears that they were produced more frequently during the early Caloosahatchee periods (periods I and IIA) (Austin 2013:666). Miscellaneous, non-uniform flakes from the Pineland collection were used for scraping, graving, and drilling (Austin 2013:670).

Shells were abundant in the Calusa environment and were, thus, practical for manufacturing cutting tools such as scrapers, knives, choppers, adzes, celts, chisels, and hoes (Patton 2013a). An experimental comparison between a Pineland sunray venus shell knife and a modern steel kitchen knife demonstrated that the traditional Calusa tool was, in fact, as efficient in cleaning a fish as the modern tool. Surfclam, gastropod, and other bivalve shells also performed well in meat cutting, intricate woodworking, and other tasks for which a sharp edge was necessary (Marquardt 1992a:192-199; Patton 2013a:558-560).
Adzes and celts (adzes have unifacial cutting edges, and celts have bifacial edges) were chipped from large, durable columella whorls (Marquardt 2013:208-211). The development of tool shell tool manufacture, as exhibited in adzes and celts, transitioned from modification of outer whorls alone to the incorporation of whole-whelk forms. Analysis of adzes from Useppa Island revealed that they were manufactured in various shapes, including rectangular, oval, and trapezoidal and exhibited both flat and scooped blade forms (Torrence 99:44). The Johnson/Willcox collection from Mound Key contains an unusually large (105.3 g) shell adze, which appears to have been used for heavy-duty woodworking (Wheeler 2001:43).

Bone served as the medium for the manufacture of points, daggers, and perforators. The material was cut, chipped, or snapped in order to produce a sharp edge or point. Most southeastern archaeologists are of the opinion that bone points were hafted to spears or arrow shafts and were used for hunting small game, but the presence of bone points on aquatic sites in southwest Florida suggests that the Calusa used the points predominantly for fishing (Walker 1992b:230). Several dagger-like tools have been identified as cut alligator, deer, human, and other mammal bone (Willey 1949). Perforators, used for drilling shell, piercing animal hides, tattooing, etc., were also cut from bone or from fossilized shark teeth (Kozuch 1991).

Hammers and Pulverizers

Hammering utensils are abundant on Calusa sites. They were manufactured primarily from shell, although chert and dolomite hammers are present in the Pineland collection (Marquardt 1992b). The production technique required the manufacturer to select a large gastropod shell, typically *Busycon*, and remove the inner and outer whorls from the collumel (Torrence 1999:34). The manufacturer could grind the collumela into a blunt pulverizer or a pick.
(Patton 2013a:561). If the manufacturer intended to haft the hammer to a handle, additional blows were applied to the whorls on either side of the collumela, exposing a notch through which a handle could pass (Marquardt 1992a:200).

Experimental analysis suggests that hafted hammers were more efficient than unhafted hammers (Torrence 1999:35). The paucity of Calusa “hand hammers” corroborates such a suggestion (Marquardt 1992a:202). One Pineland “hand hammer” exhibits considerable modification to the shell from which it was cut. The outer whorls were removed from the shell, the sharp edges of the whorl and shoulder were smoothed, and the tapered end of the collumela was ground to a pestle profile. It appears that the tool was shaped to fit comfortably in hand for pulverizing, mashing, or tenderizing plant and animal substances (Marquardt 1992a:203).

Although ample, shell hammers were not efficient in terms of durability. After analyzing Useppa Island’s shell hammers, Corbett Torrence (1999:36) suggested that inefficiency was the primary reason for the abundance of tools on Calusa sites. He observed that each shell would have begun to dry as soon as it was removed from its aquatic environments. The drying effect, in combination with repeated pounding, rendered each shell hammer brittle after only short interval of utilization. Despite such inefficiency, shell was plentiful and easy to modify, rendering it an adequate source for the traditional tool assemblage.

Subsistence Tools

Analyses of faunal and floral remains demonstrate that Calusa subsistence was based on aquatic exploitation. Specifically, estuarine fish and shellfish were the staple food source and were supplemented with birds, mammals, amphibians, reptiles, and wild plants (Widmer 1988:224-250). In the temperate climate of south Florida, aquatic food sources were available
year round. Therefore, the Calusa subsistence strategy emphasized procuring technology, rather than preserving and storing technologies.

Bony fishes, marine snails, sharks, rays, bivalves, turtles, amphibians, and crabs were the predominant proteins in the Calusa diet. As such, the Calusa developed fishing tools for diverse tasks in both estuarine and marine environments (Walker 1992a:265). Assemblage analyses indicate that traditional fishing techniques included spearing, casting nets, harpooning, and sinking hook-lines.

There are few tangible examples of fishing nets from Calusa sites. Fine mesh nets from Key Marco and twenty-three short cordage fragments from Pineland are evidence that the Calusa manufactured traditional cordage by twisting palm fibers into two-ply strands (Newsom et al. 2013:585-587). While the specimens from Key Marco and Pineland are the only extant cordage specimens, there is indirect evidence of net manufacture and use on virtually all Calusa sites. Such evidence is present in the form of gourd floats, stone or shell sinkers, stone anchors, and gauges for spacing fishnet knots (Walker 1992a:296). In addition, Marquardt (1992a:212) and Marion Gilliland (1975:199) interpret perforated bivalve and gastropod shells as net anchors or weights. In a thorough investigation of Caloosahatchee fishing practices, Walker (1992a) concludes that net makers used rectangle-shaped shell, bone, or wooden gauges as uniform spacers between knots in mesh fishing nets.

Evidence of spear fishing and hook-and-line fishing survives in the form of bone points and stone and shell weights. Walker (1992a:299) speculates that spears or harpoons were useful in shallow water where stingray and flounder lived. Hooks were probably taken into deeper water to catch large, fast-swimming fish like jack and shark. For large or aggressive offshore species, a wooden hook would have been used for the catch and a club or rope noose for the kill
Mako shark (*Isurus* sp.) and other deepwater faunal remains, a carved wooden catamaran model, and a canoe paddle from Key Marco indicate that the fishers in the Calusa region had a long tradition of offshore fishing (Widmer 1988:251). Curiously, there is an absence of fishing weir remains. The absence of fishing weirs may substantiate the Calusas’ reliance on offshore species, although it may simply be the result of poor preservation. The majority of meat on Calusa sites appears to have been estuarine, which indicates that shallow water subsistence was, indeed, more prevalent than offshore fishing (Walker 1992a).

Additional means of procuring aquatic life involved digging for shellfish, pounding individual oysters or bivalves free from clutches, and possibly setting basket traps for crabs. Wooden probes, of which there is no extant evidence, would have served as digging implements. Shell or stone hammers would have been used for loosening clutches and for opening shellfish in order to collect the meat. There is no direct evidence of basket traps, but an abundance of crab, gastropod, and scallop remains suggests that the Calusa had an effective technique for capturing mobile hard shell creatures. If they did not employ basket traps, they likely caught small aquatic animals by hand (Walker 1992a:299).

**Ceramics**

During a 1904 archaeological expedition to Florida, Clarence Bloomfield Moore observed that inhabitants of the southern coast did not typically bury their dead with earthenware. He noted it was rare to find bones and ceramics in associated contexts, and when he did, the vessel fragments were of “far inferior quality” compared to those of central and northern Florida (Mitchem 1999:310). More recent mound excavations support Moore’s conclusion to an extent. Between 1988 and 1992, archaeologists at Pineland recovered Caloosahatchee IIB, III,
and IV ceramic fragments from mortuary contexts. There was little variation in the styles and pastes of these undecorated specimens (Hutchinson 2013:373). Excavators at Useppa Island discovered a burial in which the skeletons were capped by a layer of undecorated ceramic sherds (Cordell 1992:141). The same survey of Useppa Island included fifteen other sites, which confirmed Moore’s observation of whole-vessel scarcity. In addition, the survey yielded a ceramic sample that was 95% undecorated (Cordell 1992:106).

Ceramic specialists have gone to great lengths to identify pottery variability from among the sparse, homogenous Caloosahatchee samples available. Their efforts make it possible to define accurate chronologies for South Florida. Plain ware persisted as the predominant pottery type for the entire Caloosahatchee region between 500 B.C. and A.D. 1500 (Widmer 1988). During these 2,000 years, potters manufactured vessels in the Glades Plain tradition and seldom introduced radical changes to vessel shape, decoration, paste, and thickness (Cordell 1992, 2013). Indeed, an analysis of over 22,000 Pineland sherds revealed that a sand-tempered Belle Glades paste, an undecorated surface, and an outslanting bowl form characterized the majority of ceramics between A.D. 50 and 1500. St. John’s types, Weeden Island types, Sand-tempered Plain, and Pineland Plain were identified in significantly smaller quantities. The frequency of nonlocal ceramic types appeared to increase during Caloosahatchee IIB, III, and IV, indicating that residents of Pineland experienced increased contact with extralocal groups leading up to the Spanish arrival in Florida (Cordell 2013:382, 395-504). Despite extralocal influences, the Calusa continued to produce pottery according to traditional techniques and styles.
Miscellaneous Food-related Utensils

Archaeologists have interpreted a number of shell and wood objects as traditional serving utensils. Patton (2013a:563, 565) identifies one possible funnel and four spoons in the shell collection from Pineland. Excavations of an Archaic deposit on Useppa Island yielded a dipper and a spoon cut from the outer whorls of large collumela shells (Torrence 1999:42-43). Marquardt (1992a:217) also identified dipper and spoon specimens from the Charlotte Harbor area. He distinguished them from one another based on the presence or absence of handles. Dippers/vessels lack handles, while spoons/scoops possess handle features. There are a few examples of wooden cups from the Caloosahatchee region, including one “soft wood” cup recovered during C.B. Moore’s 1904 expedition to Chokoloskee Key (Mitchem 1999:320).

Summary of Traditional Utilitarian Objects

The Calusas’ assemblage of utilitarian goods reflects a localized economy. Manufacturers rarely looked beyond the Caloosahatchee region for production materials. They crafted a majority of tools from the shell and bone of local fauna. They typically tempered their ceramics with sand, an abundant resource in the aquatic environment. The majority of their subsistence utensils were produced and utilized in order to maintain marine/estuarine subsistence. Ultimately, utilitarian material culture was conducive to upholding self-sufficiency in the Caloosahatchee region.

Evaluation of the Artifact Sample

The evaluation sample consists of 95 artifacts from collections at the National Museum of the American Indian (NMAI), the University of Pennsylvania Museum of Archaeology and
Anthropology (UPMAA), the South Florida Museum (SFM), and the Florida Museum of Natural History (FLMNH). The sample consists of beads, disks, effigies, pendants, and unidentified items, which were analyzed by institutional staff or outside researchers. It must be noted that there is a distinction between previous analyses and the evaluation in this study. This study makes no attempt to reanalyze the artifacts or to establish their relationships to known shipwrecks. The aim is to evaluate and test them with the homology/analogy/innovation/novelty model. Table 9 summarizes the evaluation for the total sample.

Many of the artifacts in the sample lack precise provenience information. To the best of the author’s knowledge, all items were recovered from 16th- and 17th-century Calusa deposits. The probability of salvage could not be determined for the objects evaluated in this study; but based on the documentary analysis (refer to Chapter V), all objects are representative of materials that could have been salvaged from Spanish ships. Because the artifacts do not belong to a single systematic collection, the sample only reflects a hypothetical salvage assemblage.
**TABLE 9**
**EVALUATION OF ARTIFACT SAMPLE**
KEY: O= Ortona, M= Mound Key, P= Pineland, L= Lee County, G= Glades County, H= Homology, A= Analogy, N= Novelty

<table>
<thead>
<tr>
<th>Artifact</th>
<th>Repository</th>
<th>Object</th>
<th>Form</th>
<th>Material</th>
<th>Modification Technique</th>
<th>Finishing Technique</th>
<th>Site</th>
<th>H/A/I/N</th>
</tr>
</thead>
<tbody>
<tr>
<td>A6839</td>
<td>SFM</td>
<td>bead</td>
<td>tubular</td>
<td>gold sheet</td>
<td>rolling and crimping</td>
<td></td>
<td>O</td>
<td>H</td>
</tr>
<tr>
<td>A6840</td>
<td>SFM</td>
<td>bead</td>
<td>tubular</td>
<td>gold sheet</td>
<td>rolling and crimping</td>
<td></td>
<td>O</td>
<td>H</td>
</tr>
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<td>bead</td>
<td>tubular</td>
<td>gold sheet</td>
<td>rolling and crimping</td>
<td></td>
<td>O</td>
<td>H</td>
</tr>
<tr>
<td>A6739</td>
<td>SFM</td>
<td>bead</td>
<td>bird effigy</td>
<td>gold alloy</td>
<td>unmodified</td>
<td></td>
<td>O</td>
<td>A</td>
</tr>
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<td>convex rectangle</td>
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<td>O</td>
<td>H</td>
</tr>
<tr>
<td>A212</td>
<td>SFM</td>
<td>pendant</td>
<td>circular</td>
<td>silver</td>
<td>hammering and perforating</td>
<td>stamping</td>
<td>O</td>
<td>H</td>
</tr>
<tr>
<td>A6735</td>
<td>SFM</td>
<td>pendant</td>
<td>arrowhead effigy</td>
<td>gold</td>
<td>unknown</td>
<td></td>
<td>O</td>
<td>H</td>
</tr>
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<td>A205</td>
<td>SFM</td>
<td>disk</td>
<td></td>
<td>silver</td>
<td>hammering and perforating</td>
<td>stamping</td>
<td>O</td>
<td>H</td>
</tr>
<tr>
<td>A6737</td>
<td>SFM</td>
<td>cone</td>
<td></td>
<td>gold</td>
<td>hammering and perforating</td>
<td>stamping</td>
<td>O</td>
<td>H</td>
</tr>
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<td>A6736</td>
<td>SFM</td>
<td>effigy</td>
<td>jaguar figurine</td>
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<td>A</td>
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<tr>
<td>98-20-1</td>
<td>FLMNH</td>
<td>tablet</td>
<td>two-piece spatulate</td>
<td>gold</td>
<td>cutting, hammering, perforating</td>
<td>incising, polishing</td>
<td>P</td>
<td>H</td>
</tr>
<tr>
<td>8193 #1</td>
<td>UPMAA</td>
<td>bead</td>
<td>spherical</td>
<td>silver coin</td>
<td>perforating and hammering</td>
<td>polishing</td>
<td>MK</td>
<td>H</td>
</tr>
<tr>
<td>8193 #2</td>
<td>UPMAA</td>
<td>bead</td>
<td>barrel</td>
<td>silver coin</td>
<td>perforating and hammering</td>
<td>polishing</td>
<td>MK</td>
<td>H</td>
</tr>
<tr>
<td>8193 #3</td>
<td>UPMAA</td>
<td>bead</td>
<td>spherical</td>
<td>silver coin</td>
<td>perforating and hammering</td>
<td>polishing</td>
<td>MK</td>
<td>H</td>
</tr>
<tr>
<td>8193 #4</td>
<td>UPMAA</td>
<td>bead</td>
<td>spherical</td>
<td>silver coin</td>
<td>perforating and hammering</td>
<td>polishing</td>
<td>MK</td>
<td>H</td>
</tr>
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Homologies

There are a total of eighty-six homologous objects in the evaluation sample. The homology component consists of beads, pendants, disks, cones, and tablets. Each of the objects was modified during the process of imposing a new function on the original Spanish material.

Homologous Beads (n=72)

The sample’s tubular beads, traditionally manufactured from hollowed bone and shell, were constructed predominantly of gold, silver, and tin sheets. The sample also contained one silver coin, which had been rolled to form a tubular bead. The manufacture technique for tubular sheet metal beads involved cutting the sheet to an appropriate size and shape and rolling the ends of the cut around a mandrel. Two of the sheet metal beads (UPMAA 8194#1 and 8195#11) were cut from a piece of tin alloy, which had been stamped with dots, scrollwork, the image of a crucible, and the letters “S” and “J.” It is possible that both beads were cut from a decorative book cover, although there is no other evidence of these types of book covers in colonial Florida (Wheeler 2000:111-112).

Gold and silver coins provided the material for the other homologous beads in the sample. The forms of these coin beads were spherical, tubular, barrel, disk, and conical. A weight comparison of seventeen silver coin beads (UPMAA Catalog #8193) revealed that they were manufactured from 1/4, 1/2, 1, 2, 4, and 8 real coins (Fairbanks 1968:105). Disk-shaped coin beads were perforated, hammered flat, and polished. In fact, all coin beads were polished until the original Spanish embossment was no longer visible on the outer surface of the bead. The method for manufacturing a spherical or a barrel (spherical-shaped with a bulge) coin bead was to perforate the center of the coin with a nail, spike, or awl and then to hammer the edges of
the coin while rotating the coin on the axis of the perforator (Figure 10). Perforation holes ranged from square to round, hexagonal, trapezoidal, and oval shapes, indicating that there was no standard punching tool for the task. Spikes and nails would have produced square and trapezoidal holes, and bone or shell awls would have produced non-angular perforations (Wheeler 2000:106). Blows applied to the edge of the coin caused the metal to mushroom outward, creating an H-shaped profile (Fairbanks 1968:104).

![FIGURE 10. Process of manufacturing a spherical coin bead. (Figure by author, 2014.)](image)

**Homologous Disks and Cones (n=6)**

All five disks in the evaluation sample were manufactured from silver, and the single cone was manufactured from gold. The manufacture methods involved cutting, hammering, and perforating the center of the metal piece. The surface of the object was polished and then finished with stamped patterns or “pie crust” crimping around the circumference.
Homologous Pendants (n=4)

Pendants in the evaluation sample were modified from gold and silver materials. The material was hammered, perforated with a suspension hole, and polished. The pendants do not exhibit standard style. Each example exhibits a plain rectangular, circular, arrowhead, or disk form. There are no zoomorphic motifs incorporated into these homologous pendants; and there are no etched, embossed, or incised embellishments incorporated into the object surfaces.

Homologous Tablets (n=4)

There are two silver tablets and two gold tablets in the sample. All of the tablets, except for SFM A6734, conform to the two-piece spatulate form (Figure 11). SFM A6734 is a gold block-T form cut from a thin gold sheet that originated in South or Central America (Allerton et al. 1984:32). The three additional tablets (FLMNH 98-20-1, NMAI 1/7964, and NMAI 1/7965) were cut and hammered from gold or silver sheets.

FIGURE 11. Two Calusa metal tablets: SFM A6734 on the left, NMAI 1/7964 on the right. (Figure by author, 2014.)
The top half of each tablet exhibits a rectangular form with a suspension hole, and the bottom half is finished with a spatula-shaped bevel. The rectangular and spatulate ends are joined in the middle with a thinner waist. The front surfaces of the spatulate tablets are polished and exhibit incised designs similar to the Mississippian sun and circle motifs on traditional wooden tablets (Figure 12).

![Metal tablet sun and circle motifs](image)

**FIGURE 12.** Metal tablet sun and circle motifs. (Figure by author, 2014.)

**Analogies**

There are a total of seven analogous objects in the evaluation sample. The analogy component consists of beads, pendants, and effigies. The objects were not modified before they were incorporated into Calusa material culture, meaning their functions were inferred.

**Analogous Beads (n=6)**

The analogous beads in the sample have been identified as effigy, hollow sphere, and tubular forms. All are manufactured from gold or gold alloys. They have been identified as similar to South and Central American beads. It is likely that the three hollow gold beads (UPMAA 1/7973 and 1/7977) were manufactured in Ecuador. The rolled sheet metal bead (UPMAA 1/7978) is similar to beads produced by native populations in Columbia and Panama (Wheeler 2000:102). Branstetter (1995:292) identified SFM A6739 as a bird effigy native to
Columbia or Northern Panama and SFM A6740 as a turtle effigy manufactured in Southern Mexico. Neither Wheeler nor Branstetter were able to identify the artifacts’ original proveniences with certainty, but both authors propose that Spaniards obtained these items from indigenous populations with the intent to ship them to European markets.

**Analogous Effigy (n=1)**

The single analogous effigy (SFM A6736) is a gold zoomorphic form. Branstetter (1995:295-296) compares the effigy to South and Central American artifacts in order to determine its origin. She refers to the form as a jaguar but notes that its shape and embellishments are also characteristic of alligator and lizard effigies from the El Dorado Mesoamerican Collection. Branstetter (1995:295) believes SFM A6736 is a jaguar effigy because it exhibits a cat-like head, folded limbs in repose, paw-like feet, a tail, and raised spots on the head and back of the figure. Although the form and decorative style is not attributable to a specific region, it is probable that the effigy was manufactured in northern Columbia or Panama.

**Innovations**

There are a total of two innovations in the evaluation sample. The innovation component consists one silver slug and one unidentified strip of silver. The objects do not have traditional correlates. They were modified before they were incorporated into Calusa material culture, meaning their new functions were imposed on the original material.
“Slug” Innovation (n=1)

The silver slug (UPMAA 8260) appears to have been hammered from an ingot or coin. It is irregularly shaped to the dimensions of 18.6 mm in length, 20.5 mm in width, and 5 mm in thickness (Wheeler 2000:107). Although it is roughly disk-shaped, it is not identified as a disk or pendant, because it is not perforated.

Unidentified Rectangular Innovation (n=1)

UPMAA 8205 is a rectangular strip of thin silver, which exhibits incised hourglass and cross-hatched designs on one side of the strip (Figure 13). Both sides of the object are highly buffed. Wheeler (2000:120-121) suggests that buffing on the object was the result of considerable use and not simply of polishing. The manufacturing method of this 62-by-8.9 mm strip is not apparent, nor is its function. The object is not identified as a pendant, because it does not exhibit a perforation or a suspension groove.

![Figure 13](image)

FIGURE 13. Unidentified rectangular innovation. (Figure by author, 2014).

Summary of Artifact Evaluation

This artifact evaluation investigates the Calusas’ salvage activities through processes of object modification. The homology/analogy/innovation/novelty model structures the evaluation
so that traditional styles and manufacturing techniques can be compared to those of the Spanish-origin assemblage. The synthesis of traditional Calusa objects establishes a frame of reference for ornamental and utilitarian artifact classes. Using the traditional assemblage as a reference, it was determined that the evaluation sample contained beads, disks and cones, pendants, effigies, tablets, and unidentified ornamental items. The majority of these objects were modified to evoke traditional Calusa style, meaning Calusa function was imposed on the Spanish material. The sample represents processes of imposition (evidenced by homologous objects) with far more frequency than it represents processes of inference (evidenced by analogous objects) and innovation (evidenced by innovated objects). The presence of novelties would have indicated that invention was a process of appropriating Spanish goods into Calusa material culture; however, there were no novelties in the sample. The following chapter discusses the implications of such patterns.
The Salvage Process: is There Agency in Object Modification?

Uncertainty is pervasive in the archaeology of southwest Florida. Archaeologists and Calusa scholars struggle to sort through unsystematic collections, looted sites, and contexts with poor preservation. This thesis is no exception. In fact, it is not even certain that the Calusa were agents of object modification. It is possible that the Calusa obtained pre-modified objects from indigenous populations on the east coast of Florida. Escalante Fontaneda (1575:f.6v-7r) claimed the Ais and Jeaga collaborated with the Calusa to salvage shipwrecks. Perhaps Ais and Jeaga artisans modified salvaged goods before sending them to Carlos. The presence of homologous objects at Ortona is possible evidence of inland communities gaining access to pre-modified goods as the assemblages were transported from the east to the west coast.

On the contrary, one narrative of the 1565 Menéndez expedition to Carlos recalls caches of unmodified gold and silver among the Calusa. In the account, Solís de Merás claims the adelantado and the soldiers bartered cheap European trinkets for a stockpile of silver and gold. The Calusa purportedly handed over 150 pounds worth of bars and coins gathered from shipwrecks (Worth 2014:245-247). Solís de Merás marveled that the Calusa were unaware of the trade value in gold and silver.

Ambiguous procurement and modification practices pose a challenge to reconstructing processes by which Calusa communities obtained Spanish goods. It may not be feasible to conclude exactly how the Calusa incorporated salvaged goods into their traditional material
assemblage, but it is possible to ask why they salvaged. The homology/analogy/innovation/novelty model depicts the intentions behind shipwreck salvage and object modification.

According to the model, homologous items represent a process wherein an individual recognizes an object’s potential to fulfill an indigenous function but only after the object has been modified. Calusa manufacturers produced homologous beads, effigies, pendants, tablets, disks, and cones by imposing such forms on Spanish materials. Some salvaged beads and effigies were similar enough to traditional Calusa forms not to warrant modification. Incorporating these beads and effigies involved a process of inferring function from the existing material. The two innovations in the sample, an irregularly formed slug and a strip of sheet silver, appeared not to have correlates in the traditional Calusa assemblage but were modified to exhibit non-traditional properties. Comparing traditional material culture to homologies, analogies, and innovations elucidates the importance of traditional function and form.

The Calusa experienced Spanish culture through material and face-to-face networks. Face-to-face contact manufactured an environment in which Spanish materials were incorporated into Calusa culture through political, economic, and ideological contexts. Acts of trade and gift giving exposed the Calusa to semantic networks that Spaniards had established and attached to specific materials. While these “diplomatic” encounters were significant to the Calusas’ colonial experiences, they were much different than those enacted through salvage.

If objects embody practices, then salvaged goods offer a more candid perspective on the intentions, beliefs, and attitudes of the Calusa than do goods obtained through diplomatic processes. The act of salvage initiated a process of Calusa agency, which was then continued by appropriating salvaged objects into Calusa culture. This thesis demonstrates that objects assumed functions and meanings in the Calusa context thorough object modification. Furthermore, the
homology/analogy/innovation/novelty model compares techniques of object modification in order to elucidate the functions and meanings of particular objects.

In this study, spherical beads offer unique insight into Calusa intention, because traditional, homologous, and analogous specimens were identified for particular the artifact type. Such a variety of specimens provides adequate basis for comparing appropriation scenarios. Manufacturers produced traditional beads by reducing shell, bone, or stone materials to the desired shape and then polishing the outer surface. In the evaluation sample, all homologous spherical beads were manufactured from silver and gold coins. The manufacturer hammered each coin around a punch tool and buffed the surface until the coin’s embossment was no longer visible. The thickness and substance of the metal did not allow the bead manufacturer to practice reductionist techniques. While the process for manufacturing coin beads necessitated innovation, the product was familiar. In comparison, analogous beads in the sample did not necessitate modification. South or Central American artisans manufactured the analogous spherical beads using their own techniques, but familiarity of the form allowed the Calusa to incorporate the beads without modifying them.

Tubular beads exhibit similar patterns of incorporation. In the evaluation sample, all of the homologous tubular beads were manufactured by rolling flat metal around a cylindrical tool. In the case of the tin sheet beads, the process involved cutting the sheet to a desired size. Although distinct from cutting traditional bone and shell material, the technique for producing homologous tubular beads was also reductionist. Rolling the metal was an innovative technique, but the end product was a familiar cylindrical shape. The single analogous tubular bead was manufactured from gold sheet metal in Central America. Like that of analogous spherical beads, its familiar form did not require modification.
A comparison of traditional, homologous, and analogous beads suggests the Calusas’ inclinations to derive familiarity from salvage assemblages. The practice of coin modification indicates that these objects did not derive value from their association with the Spanish economy. The Calusa may have imbued the coins with value, but only as material resources, not as currency. Coins could be shaped into familiar forms, and the embossment could be removed to produce a smooth surface, as was the technique for finishing shell and bone beads. The practice of buffing embossments implies that the Calusa were more interested in imitating traditional material culture than they were in evoking the exoticism of Spanish material.

Effigies, pendants, and tablets likewise exhibit attentiveness to traditional style. Of particular notability is the gold jaguar effigy of South or Central American origin. Although the effigy is “un-Calusa” in manufacture and design, it was incorporated as an analogous object. The fact that they chose to incorporate the unmodified effigy may underscore the significance of zoomorphic styles in Calusa tradition. Traditional effigies were often formed or finished to evoke local fauna. Although the jaguar is not native to southwest Florida, there is at least one other example of a stylistic feline in a traditional Caloosahatchee assemblage—the seated cat figurine from Key Marco. Perhaps the jaguar effigy represents the Calusas’ recognition and acceptance of the effigy as a familiar feline form.

Considering the popularity of zoomorphic motifs in traditional Calusa styling, the artifact sample was expected to include zoomorphic homologies. However, none of the homologous tablets and pendants in the sample exhibited zoomorphic designs. The pendants did not adhere to a standard of style and form, and the tablets were finished with Mississippian-style motifs.

The homology/analogy/innovation/novelty model does not portray object modification as a rejection of Spanish culture. It is a safe assumption that the Calusa would not have sought out
Spanish shipwrecks if they were inclined to reject Spanish culture. Nor would they have left analogous and novel objects unmodified. Modification elucidates the Calusas’ perception of shipwreck as an alternative to local aquatic resources. For the Calusa, salvaged goods were akin to raw material. The materials recovered from wrecks were either familiar to the Calusa or unfamiliar; and if they were unfamiliar, the Calusa saw it necessary to modify the material. Modification was the primary means of imposing function on materials that had little use in the traditional Calusa context. Function, in turn, lent meaning to the objects. Although this thesis does not address the meaning directly, I speculate that the Calusa derived meaning from tradition.

Undetectable Modification

Environmental conditions in southwest Florida were not conducive to preserving all salvaged materials, namely, cloth, clothing, wood, and ferrous metals. Poor preservation is perhaps the reason why utilitarian Spanish goods are absent from the artifact sample. Terrestrial excavations have not directly verified the salvage of superstructure, ship fittings, and crew equipment. However, coin beads bear evidence of the Calusa using Spanish utilitarian tools to modify salvaged material. Specifically, fourteen of the coin beads in the artifact sample exhibit square and trapezoidal perforations. These angular holes could not have been produced with traditional bone and shell awls. The perforations, in fact, resemble nail and spikes cross-sections (Wheeler 2000:106). Further analysis is needed in order to determine whether or not Calusa manufacturers used nails and spikes to modify coins. If such a process were substantiated, the implications would be significant; not only were the Calusa obtaining utilitarian Spanish objects, they were also using the objects to impose traditional function on other Spanish objects.
Concluding Remarks

This thesis discusses shipwreck salvage as one of many ways for Calusa communities to obtain Spanish goods. Spaniards funneled European goods into Calusa territory through documented trading and gift giving during the 16th and early-17th centuries. Undocumented exchanges were surely a part of the colonial experience as well. The mission and fort at San Antón, albeit short-lived, would have allowed Carlos villagers the opportunity to trade undocumented goods with friars and soldiers. Trade with extralocal groups was yet another means of acquiring Spanish goods through undocumented processes. Shipwreck salvage was unique in that diplomatic negotiation was not requisite for obtaining the Spanish objects. Identifying all processes by which the Calusa obtained Spanish goods is crucial to understanding the intentions behind shipwreck salvage.

From the homology/analogy/innovation/novelty model to the artifact and documentary evaluation, this investigation was intended to simulate the conditions of indirect colonial contact. It was designed to examine a hypothetical approach to salvage behavior, not to test a nomothetic hypothesis. The examination revealed the potential of the model to structure fragmented artifact collections in a meaningful way. Because it is based in qualitative analysis, the model does not require an artifact sample with intact provenance data. In fact, as this study demonstrates, the sample may consist of several unsystematic collections. The model was constructed to examine Calusa behavior, but its framework would be relevant to other cases of culture contact, including those induced by trade networks. The comparison of traditional or aboriginal material culture to a sample of homologous, analogous, and novelty artifacts is a technique for interpreting modification processes and, subsequently, intention.
Contemporary archaeology is not equipped to distinguish salvage activity from trade, gift exchange, or other means of obtaining Spanish goods. Moreover, it is not feasible to link salvaged goods recovered from terrestrial sites to specific shipwrecks. Filtering processes have rendered terrestrial and underwater contexts incomplete. It was most appropriate, therefore, to use the archaeological and historical evidence to speculate about Calusa agency. Indeed, they were not passive recipients of Spanish culture. Shipwreck salvage was an active process, which brought the Calusa outside of an isolated, localized economy. Their willingness to trek to the east coast signaled a change in response to external culture. Spanish materials were obviously valuable enough to warrant long distance travel, but what, exactly, was the allure?

The Calusas’ methods of appropriating Spanish-origin items underscore traditional practices. In fact, if not for modification practices, many salvaged goods would not have been incorporated into Calusa culture. Shipwreck salvage sustained a relationship between the Calusa and the Spanish, but an evaluation of the artifact sample indicated that the Calusa were not necessarily interested in effecting culture contact through colonial relationships. They imposed, inferred, innovated, and invented new functions and meanings for the majority of Spanish objects in the evaluation sample. I argue that shipwrecks were alluring in spite of their relationship to the Spanish economy, not because of it. In sum, salvage behavior was an eastward expansion of the marine exploitation strategy they had practiced on the west coast for millennia.
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