

ALL ISLANDS GREAT AND SMALL:  
THE ROLE OF SMALL CAY ENVIRONMENTS IN INDIGENOUS SETTLEMENT  
STRATEGIES IN THE TURKS & CAICOS ISLANDS

By

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To my family, who always knew I could do it

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By

Peter Thomas Sinelli

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Major: Anthropology

Archaeological research in the Turks & Caicos Islands in the southeastern Bahama archipelago has traditionally explored sites located on larger and presently inhabited islands. In contrast, sites on small, uninhabited, resource-deficient cays were typically viewed as peripheral aspects of the prehistoric settlement pattern, and few were ever systematically excavated. This dissertation evaluates the role that small cays played in indigenous settlement strategies in the prehistoric Turks & Caicos Islands.

In 2004, a University of Florida undergraduate field school surveyed seventeen small cays and conducted excavations at six small cay sites. This work revealed that small cay sites are not only common across the Turks & Caicos, but also functioned as integral components of the indigenous economy and cultural fabric. Small cays sites fall into one of three categories: outposts, economic hubs, and ritual centers. Each type of site played a particular role in the economic, social, and ritual realms of indigenous society. Significantly, this phenomenon seems to transcend cultural affiliation and temporal context. This fact suggests that West Indian prehistorians should consider the potential role of small cay environments played in indigenous settlement strategies elsewhere in the region.

## CHAPTER 1

### INTRODUCTION

#### **Research Objectives**

The main objective of my research was to explore the range of ways indigenous peoples of the Turks & Caicos incorporated small cay (pronounced “key”) environments into their settlement strategies over time. This is not a simple accounting of sites, but a thorough, theoretically-based analysis of how small cays were used, by whom, when, and why. In the process, I wanted to contribute to the broader understanding of Turks & Caicos prehistory by surveying areas for new sites and examining sites that had previously been reported, but never excavated, to determine how these factored into the bigger picture. This would facilitate a secondary goal: to unite a lot of disparate sources, thoughts, and musings from various researchers about Turks & Caicos prehistory into a single document.

Prior to my research, all of the systematic excavations conducted in the Turks & Caicos were at sites located on the larger, more resource-rich land masses that have people on them today. While this research has been seminal to developing an anthropological appreciation for Turks & Caicos prehistory, it does not tell the whole story. Many sites have been identified on smaller cays, but these were poorly understood archaeologically. As it turns out, quite a lot was happening on these small, resource-deficient cays.

#### **Profile of a Small Cay Environment**

How small is a “small” island, and what kind of environments are found there? Small cays are common throughout the Turks & Caicos, but the ones with sites usually lie on the banks within sight of a larger, historically inhabited island. Cays used by indigenous peoples vary in size. Long Cay on the Caicos Bank is substantial, as it extends for several kilometers. Others, like Pelican Cay off the north coast of Middle Caicos, are less than a hundred meters to a side.

Almost every small cay lacks trees and is dominated by scrubby, salt- and wind-stunted vegetation. Most support little terrestrial fauna, and deep soils can be rare. None seem to have any permanent sources of fresh water. For these reasons, small cays are considered marginal environments by the modern populace. None have been inhabited in modern times, though some are occasionally visited by local fishermen and day-tripping tourists. More than 30 named land masses in the Turks & Caicos fit this description. Literally hundreds more are found throughout the rest of the Bahama archipelago.

Although small islands' terrestrial resources are lacking, the marine resources found around these cays can be abundant. Many cays lie in close proximity to the reefs that have provided bounties of fish and lobster for centuries. Those cays located out on the shallow banks, farther from reef resources, are literally immersed in conch habitat. Conch meat was a staple of the pre-Columbian economy, and remains one of the Turks & Caicos' most valuable products even today. This access to marine resources was one of the primary economic reasons that indigenous peoples chose to settle small cays.

## **Project Overview**

### **The Project**

My research included both systematic survey of small cay environments and systematic test excavations at small cay sites. I conducted my research in conjunction with a field school I organized through the University of Florida. I led a team of nine undergraduate students and one graduate colleague to the Turks & Caicos for six weeks in May and June 2004. During the field school, we surveyed and/or conducted test excavations on 18 cays on both the Caicos Bank and Turks Bank (Table 1-1). We excavated six sites on six different cays, including one of the several new sites we identified in the survey (Figure 1-1).

The surveys were designed to identify any indigenous footprints on the landscape, regardless of size or scale. These footprints include “sites,” “activity areas,” and “pot drops,” among which there are important distinctions. First, a site is a place where people lived, slept, and executed domestic activities like food preparation and craft production. Sites do not have to be a certain minimum size, nor must they be permanently occupied. A site must, however, have sufficient material evidence of a range of activities that were typically executed at the household level. In the Turks & Caicos, ceramics, shell tools, fire-cracked rocks, and darker soils are excellent hallmarks of a site. When found in appreciable quantities, these indicate that humans were carrying out many or all aspects of their daily routines at that particular place for an appreciable period of time. Second, activity areas are places where indigenous peoples carried out a particular task. These contain evidence related to a specific behavior or highly circumscribed set of behaviors that do not include daily household domestic activities. In the Turks & Caicos, large shell piles indicate that mollusks were processed at a particular locale, and deposits of clay may have been where people collected material for ceramic production. Examples from elsewhere in the West Indies could include chert quarries in Antigua and turtle butchering camps in the Grenadines. Finally, pot drops are isolated occurrences of small amounts of ceramics that do not include meaningful evidence of any other domestic activity. They could reflect something as simple as a lunch break at the canuco plot or an overnight camp by hunters or fishermen.

The excavations involved only “sites”, and were designed to determine, in general terms, how each site fit into the regional indigenous settlement pattern. Because none of the sites had been excavated, establishing a culture history was a basic goal. We worked to ascertain cultural affiliation and chronology through ceramic analyses and radiometric dating. We conducted

thorough surface examinations in conjunction with subsurface testing to identify features and determine site layout and usage over time. This data enabled us to evaluate how sites were economically and socially integrated, and hypothesize on the role each site played in the regional settlement pattern over its history.

### **Categories of Small Cay Sites**

There is great diversity in the size and scale of small cay sites, but each seems to fall into one of three categories. Of the 18 cays included in the study, 11 bear evidence of indigenous activity. This evidence ranges from scattered piles of conch bearing the familiar “Indian kill hole” (a small circular perforation that results from smashing the spire of one conch into the whorl of another to facilitate removal of the animal—such conch shells are known as “punched” conch), to abundant and diverse cultural material, house outlines, and other features, scattered over more than half a hectare. This indicates that small cays were used by indigenous peoples for a variety of purposes. Generally speaking, the six sites we excavated fall into one of three categories: Outpost, Economic Hub, and Ritual Center. I want to stress from the onset that this classification scheme is not meant to pigeonhole sites or oversimplify the range of human activity that formed these sites over the generations. Rather, I offer it as a framework to understand the range of uses that indigenous peoples had for the many small islands that dotted their landscape. This is achieved by identifying certain recurring trends, then using these trends to determine what kinds of activities seemed central to the people who were there.

In a paper I gave at the 2008 Society for American Archaeology meetings, I presented a brief overview of this dissertation. In it, I described the first category of small cay site as a “Fish Camp”, which is distinct from other types of sites:

Fish Camps are the smallest sites, both dimensionally and in depth of deposit. They also appear to be the least intensively occupied, suggesting that the people

who lived there were transient or perhaps returned on an occasional basis. The artifact assemblage of a Fish Camp is limited in frequency and range of cultural material. The ceramic assemblage is minimal and consists primarily or even exclusively of undecorated, utilitarian wares. Few if any diagnostically ceremonial objects are present. The tool kit consists mostly of locally-manufactured, expedient shell implements, and imported materials like greenstone are generally absent. The faunal assemblage is restricted in scope. Locally-available taxa are usually overrepresented, suggesting that harvesting these resources may have been a driving force behind the occupation (Sinelli 2008).

In retrospect, the term “Fish Camp” seems unnecessarily limiting. I now think the term “Outpost” better reflects the data. People at an “Outpost” site could still focus on fish, of course. But the more general nature of the term better accommodates the full range of economic activities that could be in evidence at any particular, small-scale site. Two of the sites we excavated are Outposts: Gibbs Cay near Grand Turk, and CC-2 on Cotton Cay. These excavations are described in Chapter 4.

“Economic Hubs” are the second category of small cay site:

[Economic Hub] sites are among the largest in the region, and rival sites found on the large inhabited islands in both size and scope. Economic Hubs were occupied by large numbers of people for a long period of time. The artifact assemblage is diverse, and reflects the full continuum of Lucayan behavior. There is an ample ceramic assemblage and multiple series and/or subseries are well represented. Vessel forms run the gamut from undecorated utility wares to craft wares that were finely made, decorated, and occasionally adorned. Ceremonial items like cemis are in evidence, as are shell and/or stone beads and jewelry. Economic Hubs exhibit the culture’s full array of technology, and imported or exotic goods are relatively common, even when locally-made alternatives are readily available. The faunal assemblage includes not only an array of locally-available species, but also those that were collected outside of the local catchment. Structures and other features are present, and there may be evidence that areas of the site were intentionally manipulated, through leveling or infill, to produce a more desirable environment (Sinelli 2008).

Two of the sites we excavated are Economic Hubs. Middleton and Spud lie on the Caicos Bank near South Caicos and are indeed among the larger sites in the Caicos Islands. Our work at these sites is described in Chapter 5.

The final category of small cay site we identified is the “Ritual Center”:

Ritual Centers differ from the other types of small key sites in a number of ways. First, the material culture recovered from Ritual Centers skews toward those items classically associated with individuals of status. The ceramic assemblage is characterized by a higher proportion of decorated versus undecorated vessels, serving vessels versus cooking vessels, craft vessels (such as effigy pots and navicular bowls) versus common vessels, and in later periods, imported vessels versus Palmetto Ware vessels. There is also a higher incidence of ritual items than would be expected. Finally, Ritual Centers seem to be located on very small keys within sight of, and only a short linear distance from, one or more large sites on bigger islands.

Ritual Center sites appear to have been associated with elite activities like feasting, and perhaps, craft production. Pelican Cay off Middle Caicos is the archetypical Ritual Center. It and our excavations at Dove Cay near South Caicos are discussed in Chapter 6.

### **Introduction to Turks & Caicos Archaeology**

#### **Overview**

The Turks & Caicos Islands are comprised of more than 40 named islands and smaller cays at the southeastern extreme of the Bahama archipelago. This island nation has been a British Dependent Territory since the 18<sup>th</sup> century, and is politically distinct from the Commonwealth of the Bahamas, which controls the islands to the north and west. To the south lies the Greater Antillean island of Hispaniola, which is itself divided into the nations of the Dominican Republic and Haiti. The next land mass east of the Turks & Caicos is Africa.

As the name implies, the Turks & Caicos are comprised of two distinct island groups. Each group sits on its own bank—an ancient carbonate platform that rises to the surface from the

floor of the North Atlantic. Waters on the banks around the islands are shallow, but immediately plunge to thousands of meters at the platforms' perimeter. The Turks Islands are the easternmost islands, and are located on the Turks Bank. These include ten named islands, although only two are currently populated. The Caicos Islands are the westerly group and lie on the Caicos Bank. There are more than 30 islands and cays on the Caicos Bank, but only six are currently populated. The 50-km-wide Columbus passage separates the two banks, and waters in this channel are as much as 5 km deep.

Indigenous peoples first reached the Turks & Caicos in the 8<sup>th</sup> century (Carlson 1999). Over the next 900 years, different groups from different areas of Hispaniola and possibly the central Bahamas migrated in and colonized the area, drawn by a largely pristine ecology and abundant marine and other natural resources. The migrants from Hispaniola maintained close social and economic ties with their home communities, and there is abundant evidence of an ongoing trade relationship between Turks & Caicos villages and settlements in modern Haiti and the Dominican Republic.

I first became involved in Turks & Caicos archaeology in 1999, when I accompanied my graduate advisor and a team of Earthwatch volunteers on a project to excavate two sites on Middle Caicos. I was immediately captivated by these islands, their people, and the fascinating history and archaeology, and resolved to conduct my own graduate research there. I returned to Middle Caicos the next year, again to assist my graduate advisor and an Earthwatch team, and excavated two sites on the south coast of the island as part of my master's thesis research (Sinelli 2001). This experience opened my eyes to the Turks & Caicos Islands' vast potential for archaeological research.

Archaeological research does not have a deep history in the Turks & Caicos. Scientific investigations only began in the late 1970s. Since then, a handful of professional and avocational archaeologists have developed a substantial body of knowledge from the ground up. The islands' prehistoric culture history is now well understood, as is the relationship between Turks & Caicos settlements and other indigenous peoples in the region. My project was designed to expand on their excellent work, some of which has not been accessible to a wider audience.

### **Ceramic Chronology of the Turks & Caicos Islands**

Irving Rouse, the father of modern Caribbean prehistoric archaeology, “once calculated that 90% of all pre-Columbian artifacts from the West Indies are made of clay” (Keegan 1994:135). Because ceramics are central to understanding culture history, patterns of human migration and trade, and the evolution of indigenous society in the region, it is important to be familiar with the kinds of pottery found in Turks & Caicos sites.

There are four types of pottery recovered in the Turks & Caicos Islands. Three of these types, Ostionan, Meillacan, and Chican, consist of clays and tempers that are not found in the carbonate geology of the Bahama archipelago. These are known as “imported” vessels because they were manufactured elsewhere, primarily in Hispaniola, and brought to the Turks & Caicos via canoe. The fourth type of pottery, Palmetto ware, consists of a locally-available soil, Bahama Red Loam. This soil originates in Africa, where it is stirred up in sand storms and blown over the Atlantic. Over many years, it has accumulated into concentrated deposits in certain low areas of the Bahama islands. The clay is almost always tempered with crushed conch shell, which is widely available in the Bahama archipelago.

These four types of ceramics fall into a general chronology, but one that is far from absolute (see Keegan 2007, Wilson 2007 for excellent syntheses of the debate). In the Turks & Caicos, Oستionan ceramics are the oldest, followed by Meillacan, with a mix of Chican and Palmetto Ware occurring later in prehistory. The dates associated with the following ceramic-based phases are approximate, and certainly, there is some overlap and co-occurrence of multiple ceramic types. Still, the dates represent the *general timeframe* in which a certain ceramic style was most common in the Turks & Caicos.

**Oستionan phase: AD 700 to AD 1150.** Oстionan pottery was produced by people in Puerto Rico and eastern Hispaniola. Oстionan-affiliated people established the first known settlement in the Turks & Caicos, on Grand Turk, in the 8<sup>th</sup> century AD. Known as the Coralie site, this settlement was periodically occupied for hundreds of years before it was permanently abandoned in the 12<sup>th</sup> century AD (Carlson 1999). The Coralie site is the only Oстionan site in the Turks & Caicos Islands.

**Meillacan phase: AD 1150 to circa AD 1300.** The date range for Meillacan ceramics is perhaps the most controversial of any ceramic type found in the region. The mid-12<sup>th</sup> century date for the beginning of the Meillacan phase in the Turks & Caicos is solid, supported by radiocarbon evidence from more than half a dozen sites in both the Turks Islands and Caicos Islands. However, the circa AD 1300 date for the end of the Meillacan Phase in the Turks & Caicos remains somewhat speculative. Indeed, this project yielded evidence that Meillacan ceramics were in use as recently as the late 14<sup>th</sup> century AD (see Chapter 6). As it is beyond the scope of this dissertation to delve too deeply into the details of the debate, I suggest that the AD 1300 date should be viewed as the approximate time that Meillacan ceramics were being phased out and used less frequently in the Turks & Caicos than in previous centuries. Picture it this

way: if the dates for Meillacan ceramics in the Turks & Caicos were plotted on a histogram or “battleship” chart that displays frequency over time, then the range I offer would correspond to the fattest parts of the “battleship” shaped figure for Meillacan ceramics in the region.

**Lucayan phase: circa AD 1300 to AD 1513 (1620?).** The Lucayan phase ceramics include both Chican vessels imported from the Greater Antilles and locally-produced Palmetto ware vessels. Chican vessels are associated with the Classic Taino of Hispaniola, who began to manufacture these ceramics in the 13<sup>th</sup> century AD (Rouse 1992). Although other ceramics (such as Meillacan) continued to be produced in certain parts of the island, Chican soon became the dominant motif as the Taino chiefdoms gained hegemony over the island. As this occurred, fewer Meillacan vessels and more Chican pots were imported to the Turks & Caicos. As stated above, the AD 1300 cutoff date is not intended to be absolute, but as a useful approximation of when this shift in styles was affected. In a similar vein, it is known that Palmetto ware was manufactured in the Turks & Caicos as early as the 11<sup>th</sup> century AD (Keegan 2007:56). Yet it did not become widespread in the region until the 14<sup>th</sup> century. Again, this is an approximate date intended to provide the reader with a general idea of when each type of ceramic was most prevalent.

### **The Significance of Shell Bead Manufacture in the Turks & Caicos Islands**

Beadmaking is one of the few constants archaeologists have observed at sites in the Turks & Caicos across both time and space. It seems that virtually everyone was doing it, although far more intensively at some sites and times than at others. Because beadmaking was so ubiquitous, it is important to understand from the outset the underlying economic and social reasons behind this phenomenon.

Beginning with Shaun Sullivan, archaeologists have broadly understood that the people who settled the Turks & Caicos Islands did so to exploit the area's resources. Today, the economics of the situation are well understood. Coastal people living in northern Hispaniola enjoyed a certain standard of living that, as time progressed, began to deteriorate. Relatively little formal archaeology has been conducted at pre-AD 1300 sites in Haiti, but evidence from Ile à Rat suggests that the fisheries in the northeastern part of the country were over-exploited perhaps as early as AD 900, but certainly by AD 1100 (Keegan 1997b, 2007:58-64). In contrast, the Turks & Caicos were virtually pristine, with vast, abundant resources that had never been subjected to anything more than cursory human predation (Sinelli 2001:8-10, 122-127). In relatively short order, Meillacan-affiliated peoples begin popping up all over the Turks & Caicos: on Grand Turk (Carlson 1993), Gibbs Cay and Cotton Cay (Chapter 4), Middleton and Spud (Chapter 5), Salt Cay (Keegan et al 1994), Middle Caicos (Sullivan 1981, Keegan 1997a, Sinelli 2001), Pine Cay and Providenciales (Sullivan 1981, Carlson 1999), the Ambergris Cays (Brian Riggs, personal communication 2004). Radiocarbon dates from those sites which have been excavated place all of these settlements within the 12<sup>th</sup> and 13<sup>th</sup> centuries AD. Thus began the centuries-long period of resource procurement and trade in which foodstuffs and raw materials flowed to Hispaniola in exchange for finished goods not obtainable in the Bahama archipelago. In many ways this was a miniature version of Wallerstein's (1974) Modern World System that defined European nations' relationship with the West Indies centuries later. Except in prehistory, Hispaniola was the "core" and the Turks & Caicos the "periphery".

The indigenous Turks & Caicos economy grew and evolved between the 12<sup>th</sup> and 16<sup>th</sup> centuries. Preserved fish and conch were among the earliest exports and probably constituted a significant portion of the economy throughout the pre-Columbian period. Indeed, conch remains

the largest Turks & Caicos export to Haiti to this very day. Based upon the discovery at Middleton, shell tools also seem to have been exported. Salt and possibly cotton from Middle Caicos became significant in the 15<sup>th</sup> century and led to the development of the “Taino outpost” of MC-6 on Middle Caicos (Sullivan 1981, Keegan 2007:135). And through it all, many people in the Turks & Caicos were also making beads.

Unlike food, tools, and salt, beads are not critical to human biological survival. Yet they played a seminal role in the social and political realms of Hispaniolan society, so they possess a certain cultural significance that cannot be diminished. Hispaniolans incorporated beads into socio-religious items like chiefly woven cotton belts and cemis (Taylor et al. 1997). They also wore strings of beads for personal decoration (Carlson 1993), and used them in ritual contexts, such as burials (Deagan 2004:618-619). In sum, beads were a critical component of the indigenous worldview, linked to everything from status and chiefly authority to ancestor worship and the supernatural realm, with a history that extended back thousands of years to their South American roots (Taylor et al. 1997:164-169). To these people beads were, and always had been, important.

It is known that Hispaniolans made beads out of local shell and stone. Thus it is unlikely that the people who first voyaged to the islands did so expressly to produce beads—there was not necessarily a shortage, as has been hypothesized for marine food resources. Rather, the early visitors probably discovered that beadmaking could be a highly lucrative export in addition to the foodstuffs that probably attracted them to the islands initially. This situation is somewhat analogous to the discovery of gold at Coloma, California in 1848, where John Sutter had ordered built a water-powered sawmill to produce lumber for his expanding business interests (Sutter

2009 [ 1854]). In fact, it may be helpful to view the early Turks & Caicos beadmaking industry in terms of a “gold rush” mentality, for there are a number of parallels.

Keegan (2007) argues that beadmaking became an integral part of the Turks & Caicos economy because beads produced there would have been more valuable in Hispaniola than those produced domestically. I agree, and have fleshed out his argument with some insights of my own. The first reason Turks & Caicos beadmaking became economically significant relates to the Hispaniolan worldview. Although the Turks & Caicos beadmakers used conch, clams, top shell, and other mollusks to produce beads, the cherry jewelbox (*Chama sarda*) was clearly the preferred medium. This shell was special, for its deep scarlet hue coincided with the color of life and fertility (Keegan 2007:22). Moreover, the shell maintains its vibrancy over time: “While the bright pink of the [conch] will fade to white within a decade, we recovered *Chama* shells that were a brilliant scarlet after 800 years of burial” (Keegan 2007:88). Thus, beads manufactured from the shells of this mollusk would have had both immediate and enduring value—just like gold. The second reason is availability. The cherry jewelbox mollusk affixes itself to some solid object in shallow water (Abbott and Morris 1995:53-54). Thus, the rocks and cays strewn across the calm shallows of the Turks and Caicos Banks would have been prime collecting grounds. Their waters could yield much more raw material than the comparatively deep and rough coasts of northern Hispaniola, and at less cost and risk even when the round-trip voyage is factored in. The beadmakers could literally pluck wealth out of the shallow water—just like the gold-hungry 49ers did in California. Third is the ease of transport. One could conceivably transport many thousands of beads in a single dugout (although I assume they heeded the old Taino adage ‘Don’t put all of your beads in one canoe!’). This makes beads far more valuable by weight than any other exportable product—just like gold. Finally, Keegan observed that exotic things imported

from beyond the horizon tend to be viewed as inherently more valuable than locally produced items (2007:88). This must be a sort of human universal. Here the gold analogy is less appropriate, but the concept is effectively conveyed if one considers the average American's view of French champagne, Swiss watches, and Italian sports cars as compared to domestic brands.

Keegan sums the entire argument up nicely with a description of the beads produced at the Meillacan-era bead manufacturing site at Governor's Beach:

These beads were imbued with a value beyond the labor invested in them. They were red, the color of life and male potency, and they came from a place far away, across the sea. The beads were exotic and thus of greater value than objects that could be fashioned locally...In this case it was the value added to objects that come from across the sea and that differ in symbolic ways (for example, brilliant red color) from materials available at home (2007:88).

Again, it seems unlikely that beads were the primary motivator behind the colonization. Rather, the early Meillacan pioneers who visited the Turks & Caicos to collect foodstuffs stumbled upon an abundance of bright red shells in the banks' shallows and quickly realized that they had literally struck "red gold." That beadmaking was consistently profitable is evidenced by the fact that they and all of the people who followed them centuries later continued to engage in this activity. Beads never formed the foundation of the economy, but their inherent value caused them to remain an important part of regional trade throughout much of the Turks & Caicos Islands' indigenous history.

The results of our surveys and excavations at each of the 18 small cay environments are described in detail in this volume. Chapters 2 and 3 address the surveys on the Caicos Bank and Turks Bank, respectively. Chapters 4, 5, and 6 present the results of excavations at two sites on

the Turks Bank and four sites on the Caicos Bank. Finally, Chapter 7 provides a general overview and summary of what I learned, and presents a few ideas for future research.

Table 1-1. Inventory of Cays Surveyed and Sites Identified by the Field School

Cay	Nearest Island	Site Type (#)	Excavated?	Cultural Affiliation*
Pelican Cay	Middle Caicos	Ritual Center	Yes	M, C, P
Long Cay	South Caicos	Economic Hub (1) Activity Areas (4)	Yes	M, C, P
Middleton Cay	South Caicos	Economic Hub	Yes	M, C, P
Moxie Bush	South Caicos	No Site	-	-
Six Hills Cays	South Caicos	No Site	-	-
Iguana Cay	South Caicos	No Site	-	-
Horse Cay	South Caicos	Outpost or Economic Hub (1)	No	M, C?
Dove Cay	South Caicos	Outpost or Ritual Center (1)	Yes	Unknown
Plandon Cay	South Caicos	Outpost or Activity Area (1)	No	Unknown
Middle Creek Cay	South Caicos / East Caicos	No Site	-	-
Riley Rock	East Caicos	No Site	-	-
Gibbs Cay	Grand Turk	Outpost	Yes	M
Long Cay	Grand Turk	Activity Area	No	P?
Pinzon Cay	Grand Turk	Activity Area	No	Unknown
East Cay	Grand Turk	No Site	-	-
Cotton Cay	Grand Turk	Outposts (2)	Yes	C, P
Great Sand Cay	Salt Cay	No Site	-	-
Salt Cay	Salt Cay	Outpost	No	C, P

\* M = Meillacan Ceramics

C = Chican Ceramics

P = Palmetto Ware

## Turks and Caicos Islands (U.K.)

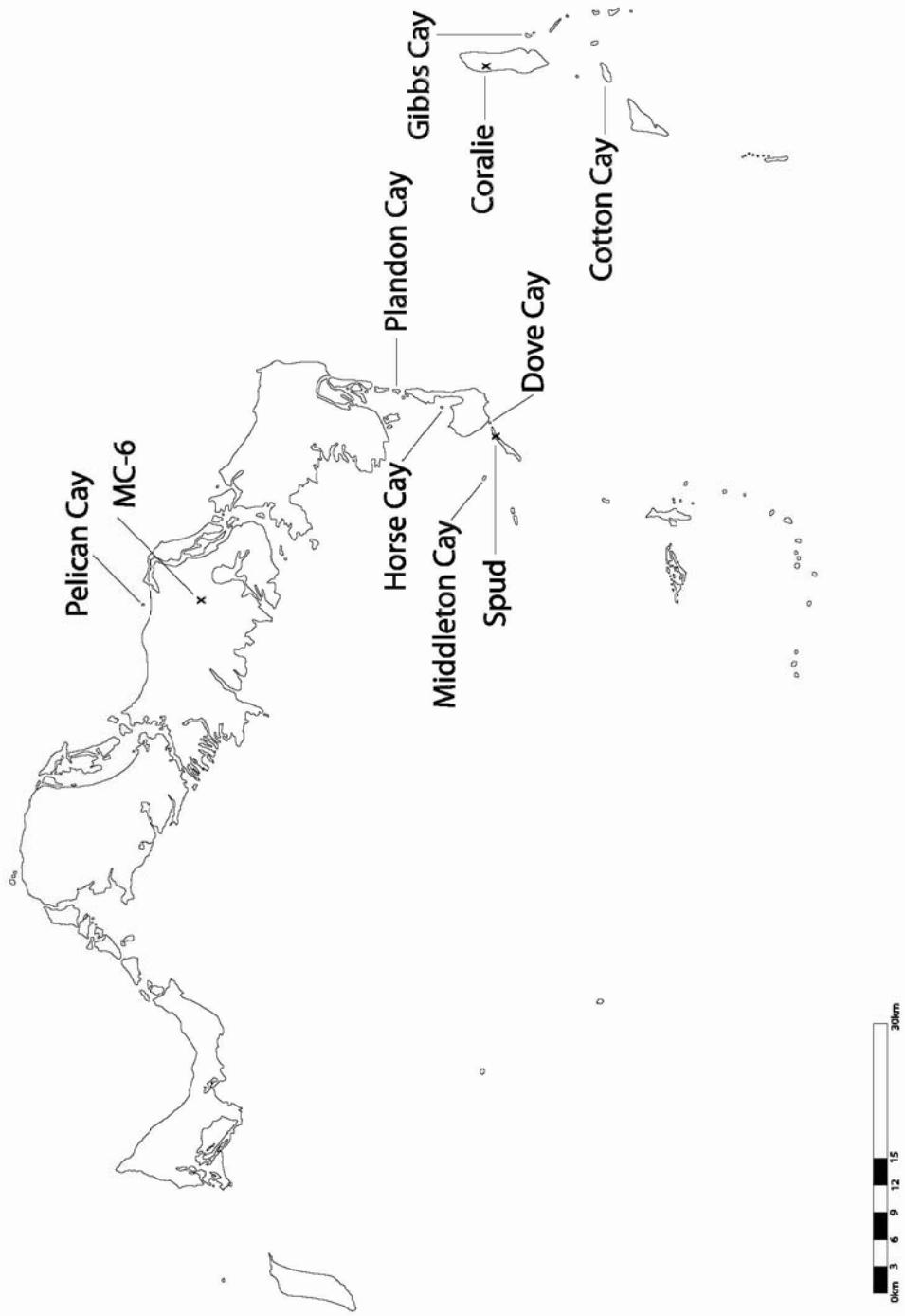


Figure 1-1. Map of Turks & Caicos Islands with relevant sites identified.

## CHAPTER 2

### THE CAICOS BANK SURVEYS

This chapter describes the surveys of cays situated on the Caicos Bank. I begin with a review of the geography, physical nature, and biology of the Caicos Bank and its islands. Next I discuss the logistical and theoretical considerations that helped shape the parameters of the survey and review the methods and strategies we employed. Thereafter, I discuss the survey of each island in detail, and conclude each discussion with an interpretation of how each individual piece may have fit into the larger regional picture.

#### **Geographical, Physical, and Biological Descriptions of the Caicos Bank**

##### **Geography of the Caicos Bank**

The Caicos Bank is the largest of the three banks in Turks & Caicos territorial waters and covers an area of 6,856 square kilometers (Keegan et al. 2008:Table 1). More than 40 named islands and cays ring the Caicos Bank (Figure 2-1), with numerous rocks and intermittently exposed tidal shoals and reefs interspersed throughout. Combined, these islands cover a total area of 589.6 square kilometers (Department of Economic Planning and Statistics 2008b). The largest land masses are arranged in a northward-bowing crescent shape along the bank's northern and eastern flanks. Not surprisingly, these largest islands are the only ones that now support permanent human populations. Currently, only six of these islands are occupied: from west to east—Providenciales, Pine Cay, Parrot Cay, North Caicos, Middle Caicos, and South Caicos. The tally of inhabited islands will increase, however, as developments on West Caicos, Big Ambergris Cay, and Dellis Cay come on line within the next several years (Turks & Caicos Tourist Board 2007). Moreover, given the pace of development in the region, it is easy to imagine that East Caicos—currently home to no one but feral cattle—might sprout posh resorts in the near future.

The western and southern flanks of the Caicos Bank are dotted with approximately three dozen presently uninhabited cays (Figure 2-1). Many are quite remote and lie more than 50 km from the nearest inhabited island. Consequently, these cays have largely escaped development. Some are even protected by the government as the French, Bush, and Seal Cays Sanctuary (Department of Environment and Coastal Resources 2007; Pienkowski et al 2005). Tourists, drawn to dive the stunning Caicos Bank wall nearby, are allowed to visit, but only under strict government guidelines.

### **Physical Description of the Caicos Bank**

The Caicos Bank is a vibrant and dynamic place. While most of the bank's area is permanently submerged at depths ranging from 3 to 10 meters, substantial portions of the northeastern section between South, East, and Middle Caicos are exposed at low tide. By all accounts this gradual expansion of the tidal shoals is a recent, and possibly transient phenomenon. When I flew over the banks on several occasions in 1999, this area always appeared to be completely submerged. Soon thereafter, during my visits in 2000 and 2001, I noticed small "islets" of exposed sand peeking out of the water. Then in 2004, when exploring the region by boat, I observed that vast areas of the banks adjacent to South Caicos were completely dry when the tide went out—almost to the point that one could walk from South Caicos to Middle Caicos. My informal observations were confirmed by the School for Field Studies staff who had been plying the local waters for years. They reported that some of their preferred research sites were now only reachable at high tide, while others were off limits entirely due to the danger of grounding or damaging the props of their flat-bottomed skiff research vessels (Bob Bose, personal communication 2004). My informal conversations with local South Caicos fishermen offered further insight. Several complained about the increasing

difficulty in navigating their boats northwest of the island. “That sand is always shifting.” I recorded one fisherman’s lament during a conversation at a local watering hole. “We can’t fish the rocks by East Caicos no more. You gotta walk or ride the airboat. And I ain’t gonna walk, and I ain’t got no airboat!” I inquired further as to whether this phenomenon had happened before, and then had somehow abated. The reply was a shrug, although my informant did volunteer that “Maybe a big storm come and clear it out for us.” From this statement I inferred that the tropical cyclones that have abused the Turks & Caicos since time immemorial continue to play an active role in sculpting the bathyscaphe in ways that directly impact those who rely upon it for their livelihood. While it is impossible to accurately reconstruct the bank’s precise appearance in prehistory, it is entirely reasonable to assume that indigenous people had to cope with the same forces that shape the bank today. Consequently, it is important to consider the natural shifts in the bank’s morphology when studying settlement and resource exploitation patterns—whether modern or prehistoric.

### **Biology of the Caicos Bank**

The Caicos Bank has always been known for its marine bounty. As the largest of the three banks in the nation’s waters, the Caicos Bank boasts more than two-thirds of the Turks & Caicos’ 300 km of reefs and nearly 80% of the nation’s territorial marine bank area. I begin this section with a brief overview of reef and bank biology. I then discuss the state of the modern Caicos Bank fishery and why this is important to understanding prehistory. Finally I review the particular species that were of interest to the indigenous settlers of the region.

#### **Overview of reef and bank fauna**

There are two types of reefs on the Caicos Bank: shallow and deep. Shallow reefs are 3 to 4 meters deep and are distributed somewhat arbitrarily around the bank, but tend to cluster

around islands. Deep or “fringing” reefs are 15 to 20 meters deep and are found only at the bank’s edges where the water outside the reef rapidly drops off to thousands of meters in depth (Tupper and Rudd 2002:485). An extraordinary array of marine life populates these reefs. Scientists and volunteers affiliated with the Reef Environmental Education Foundation have recorded no fewer than 318 species of fishes on and around reefs in Turks & Caicos waters (Reef Environmental Education Foundation 2007). Corals, mollusks, crustaceans, and other invertebrates are also abundant in the reef environment. Some of these reef species, particularly the Caribbean spiny lobster (*Panulirus argus*), have been consistently exploited by humans throughout history.

As one moves away from the reefs and into the open waters of the bank, the faunal assemblage shifts profoundly. Fishes are certainly present but not in the diversity one would encounter on a reef. The most common of the bank fishes are bonefish (*Albula* sp.), which thrive in the turtle grass beds common in these shallow waters (Wing and Scudder 1983:197). Mollusks dominate the remaining biomass, especially the Queen Conch (*Strombus gigas*), a large gastropod that favors the bank’s grass beds and has been a staple of the Turks & Caicos human diet for more than a thousand years. A variety of other mollusks, such as the bivalves *Codakia orbicularis* and several species of the genus *Tellina*, the littoral gastropod *Cittarium pica* (whelk or West Indian Topsnail), and others have been important to human foragers at various times in history.

### **The modern Caicos Bank fishery**

Today, the Turks & Caicos fishing industry is the third largest sector of the national economy, behind tourism and financial services. It employs approximately 8% of the national labor force (75% on South Caicos) and accounts for 10% of national GDP (Clerveaux et al.

2003:172). The main commercial catches are conch and lobster—these products account for 90% of the nation’s total exports. Fin-fish like snapper and grouper are also exploited, but primarily for sport and domestic consumption (Turks & Caicos Islands Government, Department of Environmental and Coastal Resources 2004:2). During the 2003-2004 season, (the most recent season from which data are available), The Turks & Caicos fishery produced landings of 388 metric tons of spiny lobster, 680 metric tons of conch, and 1,068 metric tons of “various reef fish” that includes “groupers, snappers, and large pelagics...utilized for local consumption or as part of the sport fishery” (Department of Economic Planning and Statistics 2008a). Of this catch, the Turks and Caicos exported nearly 300 tons of lobster (77% of the total catch), 400 tons of wild conch meat (59% of the total catch), and 30 additional tons of farmed conch meat (Turks & Caicos Islands Government, Department of Environmental and Coastal Resources 2004:9-10).

As mentioned above, fish are not exported, but caught for local consumption or for sport.

Since the economic stakes are so high, the sustainability of these vital fisheries is a Government priority. Conch and lobster yields have fluctuated wildly over time, but due to aggressive regulation and improved enforcement, landings have stabilized over the last decade and now fall in line with official production quotas, or nearly so. Both fisheries operate under the “Maximum Sustainable Yield” that ensures a suitable breeding population and stable stock size. Even though poaching of undersized lobsters remains a problem (Tewfik and Bene 2004), barring some unforeseen disaster, the Caicos Bank should continue to provide more than 1000 tons of conch and lobster per year in perpetuity.

The productivity of the modern Caicos Bank fishery is relevant to any discussion of regional prehistoric colonization and settlement patterns. Consider the conch fishery. For the last 100 years Turks & Caicos fishermen have harvested between 1 and 4 million individual

conchs per year (Bene and Tewfik 2001:165). Until the 1950s, much of the catch was exported to Haiti (Doran 1958) in exchange for fresh produce. More recently, the United States has emerged as the greatest importer of Caicos conch, driven by demand from immigrants who migrated from Caribbean Basin nations where conch was a common commodity (Hesse and Hesse 1977). Under the current government landing target—around 750 tons of conch meat per annum—more than a million individual conchs are harvested annually while still maintaining a “stable” population. These are extraordinary numbers. The banks have *so many* conch that they satisfy nearly 30,000 permanent residents and tens of thousands of fritter-hungry tourists, and *still* support exports of 400 metric tons per year. Few fisheries in the world remain so productive in the face of development and widespread overexploitation driven by increasing global demand for seafood. The Caicos Bank is truly exceptional.

Consider that prehistoric human populations were orders of magnitude smaller than today’s census figures. The Turks & Caicos were never densely occupied—even an estimate of a thousand souls spread across the archipelago at any given time is probably an overestimate. Consider further that the modern conch fishery, productive as it is, has been regularly exploited by colonial Europeans, African slaves, and their descendants for more than 350 years. The islands’ early inhabitants would have arrived to a virtually pristine ecology that had never seen much, if any, human predation. These factors point to a scenario in prehistory, when conch were so plentiful that even a determined effort to eradicate them would almost certainly have met with failure. The early Lucayans and their descendants would have had all the conch they could ever hope to consume, plus plenty more to dry and export as trade items to other islands and localities.

## **Caicos Bank exploitation in prehistory**

Clearly conch and lobster were important parts of the prehistoric diet and economy. But variety has always been the spice of life, and by no means did the indigenous people of the Turks & Caicos limit themselves to a menu of giant marine snails and crustaceans. A number of studies of prehistoric diets have been completed for the Turks & Caicos Islands (Sullivan 1981; Wing and Scudder 1983; Carlson 1999; Keegan 1997; Jones O'Day 2002). The most relevant to this analysis is Wing and Scudder's 1983 piece "Animal Exploitation by Prehistoric People Living on a Tropical Edge." The article focuses on the vertebrate resources extracted from the Caicos Bank. It complements what is known from other sources about the bank's extraordinary conch and lobster resources to create a fuller picture of marine-based indigenous subsistence.

Wing and Scudder examined faunal material recovered from three sites in the Caicos Islands. Two are located on Middle Caicos and these results are most relevant to this discussion. Sites MC-12 and MC-6 lie only 5 km apart as the crow flies, but are located on opposite sides of the island with access to distinctly different kinds of marine resources. The MC-12 site is located "on the northern shore of the island within 1 km of a coral reef" and the open ocean (Wing and Scudder 1983:197). Its ceramic assemblage is primarily Palmetto ware, and the site has been radiocarbon dated to AD 1040 (Keegan 1997:56). These attributes indicate that MC-12 was contemporaneous with many of the early occupation horizons at the sites I discuss later in this dissertation, which makes it an ideal site for determining what resources were available in the region at that time. In contrast, MC-6 is situated "on the south side of the island on the edge of the tidal flats which border the lagoon [i.e., the Caicos Bank]" (Wing and Scudder 1983:197). Its ceramic assemblage is Palmetto Ware and Chican. The site's earliest radiocarbon date is AD 1430, and the discovery of European brass in the deposits indicates that MC-6 was active after

Spanish contact (Keegan 2007:182). Wing and Scudder's MC-6 results provide us with a clear picture of what later prehistoric peoples were eating when they focused heavily on bank resources.

Wing and Scudder's analysis of the vertebrate faunal assemblages at MC-12 and MC-6 demonstrates the range of marine resources available to indigenous peoples on the Caicos Bank. Importantly, the differences between the two sites suggest that in prehistory, people acquired much of what they ate from the area immediately around them and did not need to venture far afield to acquire enough protein to eat. When one considers the significant caloric contribution of mollusks and lobster in context with Wing and Scudder's appraisal of the value of vertebrates to the diet, it seems evident that the Caicos Bank was so productive that individual villages could easily support themselves by adjusting their foraging and collection techniques to suit the locally available fauna (1983:209).

Wing and Scudder's findings have important theoretical implications for my study of small-island environments. They observed that the indigenous people of Middle Caicos acquired between 75 and 85% of their vertebrate protein from the sea. In reality, the total contribution of marine protein in the diet had to have been even higher since their analysis did not consider mollusks like conch or crustaceans like lobster. In terms of land area, Middle Caicos is the largest island in the Turks and Caicos, and as such could be expected to support a concomitantly large array of terrestrial fauna. Yet according to Wing and Scudder, indigenous people were not relying heavily upon these resources—they overwhelmingly foraged for protein in the sea. It follows that their settlement strategies would reflect this preference. They would want to live where the food was, and their food was in the water. As a consequence, small islands that offered easy access to these resources would have been highly desirable places to settle.

Wing and Scudder identified 23 taxa in the vertebrate faunal assemblage at MC-12 (1983:201-202). Marine taxa account for 18 of the 23 taxa identified, and represent 75.3% of the Estimates of Maximum Biomass (hereafter EMB). Seventeen of the 18 taxa of marine vertebrates were fishes. The fish assemblage was dominated by taxa that inhabit reefs. Five taxa of omnivorous reef fishes account for 41.1% of EMB. These include parrotfishes (*Sprisoma* and *Scaridae*), that together were the most abundant individual taxa observed at the site. Interestingly, these data provide insight into the fishing technology employed by the people of MC-12. Wing and Scudder observed that these “reef omnivores” were all of similar size, and interpret this data as evidence that the residents of MC-12 were probably using traps placed on reefs to collect them. “Traps by their nature narrow the range in the size of fishes they catch by excluding those fishes too large to enter and those small enough to leave through the mesh” (1983:209). Nine of the remaining 12 taxa of fishes were “reef carnivores” that were probably collected by hook and line (Wing and Scudder 1983:203,209), although these predators can also be trapped if they enter a trapping device in pursuit of prey fishes who are already trapped themselves (Keegan 1986:822). Reef carnivores account for 29.5% of EMB. Rounding out the fish assemblage were 3 taxa of fishes found not on the reefs, but in shallow water near the beach and on the tidal flats. Bonefish (*Albula vulpes*) dominated this aspect of the assemblage—the other two taxa were each represented by a single specimen. Overall, these taxa were a small component of the total assemblage, accounting for only 3.9% of EMB (Wing and Scudder 1983:202). The last of the 18 marine vertebrate taxa identified was sea turtle. It accounted for 4.2% of EMB, which means that turtles were as significant a food source as shallow-dwelling flats fishes like bonefish (Wing and Scudder 1983:202).

Five terrestrial animals were identified in the study, accounting for 17.2% of EMB. Land crab was the most prevalent taxon, at 7.5% of EMB. The remainder consisted primarily of iguana (*Cyclura carinata*), although two taxa of birds were recovered in small amounts (Wing and Scudder 1983:202). The remains of a dog were also identified, which corroborates Columbus' testimony that the Lucayans kept these animals (Dunn and Kelley 1989:117). It is unknown if they ate dog, or rather kept them as pets or for rodent control (Wing and Scudder 1983:209).

The vertebrate faunal assemblage at MC-6 is remarkably different from that of MC-12 and reflects an emphasis on resources found in the nearby tidal flats. At MC-6, Wing and Scudder identified 38 taxa in the assemblage (1983:200-201). Again, there was a heavy concentration of marine resources. Marine taxa accounted for 28 of the 38 total taxa and comprised 85.7% of EMB. Twenty-seven of the 28 marine taxa were fishes, of which 20 were reef-dwelling fishes. This reflects a greater diversity of reef-dwellers than were recovered at MC-12, but overall their contribution to EMB at MC-6 was less than half of the total at the other site: 32.3% at MC-6 compared to 70.6% at MC-12. Of the reef fishes, there were 5 taxa of "reef omnivores" comprising 9.9% of EMB and 15 taxa of "reef carnivores" comprising 22.4% of EMB (Wing and Scudder 1983:200-201). Not surprisingly, tidal flats taxa filled the difference. Seven taxa of tidal flats fishes, with bonefish again being the overwhelming favorite, accounted for 15.5% of the EMB. The only non-fish marine vertebrate recovered was sea turtle. These thrive in the grasses of the shallows and constituted a remarkable 19.8% of EMB. As such, sea turtle is the single largest taxon in terms of contribution to EMB in the assemblage.

The residents of MC-6 exploited terrestrial creatures as well. Ten taxa were identified, accounting for 14.3% of EMB. Iguana dominated the terrestrial assemblage with 10.2% of

EMB. Land crabs were present, but accounted for only 1.6% of EMB. Wing and Scudder (1983) identified 4 bird taxa, but none in substantial amounts. More recently, Dr. David Steadman of the Florida Museum of Natural History found 17 taxa of bird in his analysis of material recovered from 1999 and 2000 excavations at MC-6 (Keegan 2007:179). This suggests that avifauna played a more substantial role in the MC-6 diet than Wing and Scudder could ascertain with the earlier samples.

### **Survey Theory and Methodology**

#### **Survey Theory**

As my objective was to identify outlying cays that were used by indigenous peoples, it seemed reasonable to focus our surveys on those islands that had the greatest potential to remain easily accessible within open water and lay near a wide variety of marine habitat. In reaching this decision, I was often troubled by the fact that the current situation may not be representative of what the region looked like centuries ago. I recognize that there are probably some sites on the smaller cays northwest of South Caicos and on the southern shore of East Caicos, and I certainly plan to find out someday. However, given the practical issues of the moment and the theoretical factors about which one can only hypothesize, I decided to focus the survey on the cays west and south of South Caicos in the eastern Caicos Bank.

The geography, biology, and physical nature of the Caicos Bank were on my mind as I crafted an appropriate survey strategy. I initially chose the South Caicos region for purely practical reasons. First and foremost, I wanted to excavate the sites that had been reported by Bob Gascione, Jane Minty, and Brian Riggs on Middleton Cay and Long Cay. Since these cays were at most a 15 minute boat ride from South Caicos, it was natural to base our operations out of that island. Second, South Caicos is home to the School for Field Studies' Center for Marine

Resource Studies. SFS has a fully equipped field station, a trained, professional staff, and offered room and board and all the local knowledge and logistical support the team would need for an extended stay—and all at a reasonable price. Finally, there are a large number of small cays within a reasonable linear distance of Cockburn Harbour, South Caicos. Operating out of that island would optimize the number of small cays within reach given the limited time and resources available. Given these factors, I decided very early on to base the squad on South Caicos. Yet upon our arrival in the islands, I had to develop a more precise model to determine which of the many small cays in the region to visit.

Logistics were a major factor in crafting the survey strategy. As discussed above, small cays north and northwest of South Caicos are virtually impossible to reach by boat. To survey these islands, one must either hire an airboat at enormous expense or slog several kilometers through the soupy oolitic muck on foot. Therefore, I resolved to focus on those cays that were more readily accessible.

There were also several important theoretical considerations. The people who colonized the region were mariners *extraordinaire*. They relied on the sea for everything from the mundane (e.g. food and transportation) to the ethereal (e.g. mythology and gods). Based on personal observation and local wisdom, it was apparent that at various times some areas of the Caicos Bank silt in to the point of impeding the passage of watercraft. Exactly how or why this happens is irrelevant: sea-savvy indigenous peoples would have understood it far better than I, and it would have influenced their decision-making process. Evidently, potential habitation sites in this environment could become virtually inaccessible by water in as little as 5 years. Mindful of the fact that all of the Turks and Caicos' prehistoric residents relied on quick access to the sea for much of their physical and spiritual well-being, I concluded that areas prone to silting would

likely have been viewed by these peoples as less suitable for longer term settlement than locales in which the constantly shifting sands were less of an issue. The distribution of marine habitats also weighed into the theoretical discussion. As discussed earlier, conch and mollusks are abundant on the banks. Bonefish are found in the flats and also around mangrove stands. Reef fishes and lobsters naturally congregate on and around the reefs that fringe the bank's border. Pelagic fishes are found further out in open water, but also frequent the deeper, fringing reefs to feed. Wing and Scudder (1983) demonstrated that marine animals provided the bulk of protein in the indigenous diet. As a result, potential habitation sites that offered good access to marine environments would have been viewed favorably. Once again, this pointed to the cays south and southwest of South Caicos, where conch habitat, mollusk habitat, reef habitat, and open ocean habitat were all within easy reach.

### **Survey Methodology**

On survey days on the Caicos Bank, I split the group into teams. One team continued to work excavations under the direction of Geoff DuChemin, while a second, smaller team joined me on the survey. I usually selected three or four students, on a rotating basis, so that every student had a chance to gain some survey experience. Each survey team received a detailed lesson about proper survey technique before we departed for the target island. As we had all been excavating for some time prior to beginning the survey phase of the project, each student already knew "what a site looks like" when one walks over it. I found it far more challenging to explain the concept of settlement pattern. Although I tried to emphasize the particular environmental features that are associated with West Indian sites (e.g.: "look behind the dune by a sandy beach"), I still had to call people off rocks high up the windward bluffs with exasperating frequency. But these were teaching moments—before long each student was

picking through the bush like a seasoned veteran. Depending on the size of the survey target, we either worked as a group or split into pairs or threesomes to cover more ground. When we were separated, as on Long Cay or Six Hills Cays, I kept in constant radio contact with the other group to keep apprised of their discoveries, field any questions, and direct them to features that I thought looked promising. I always kept in contact via marine radio with the research vessel that kept station off the island in case bad weather approached or we had an emergency.

The particulars of each cay's survey are discussed in detail below.

### **Survey Results**

The team surveyed nine cays on the Caicos Bank. Each island is discussed below in the chronological order in which it was surveyed. In each case I first describe the cay's location and offer a brief physical description. Next I discuss the particulars of the survey: when it occurred and what was discovered or observed. Finally I interpret these results and examine what role each individual cay may have played in the lives of indigenous peoples. A comprehensive summary of what I learned from the surveys follows at the end of the chapter.

### **The Survey Of Long Cay**

#### **Physical description and survey methodology**

Long Cay is aptly named (Figure 2-2). It extends 4.75 km on a roughly northeast-to-southwest axis, and comprises a total land area of 96.78 hectares (Department of Economic Planning and Statistics 2008b). The island is also quite narrow. The southern half of the island averages about 250 meters wide; the northern half rarely exceeds 75 meters in width. At a point just south of the center of the cay's length, the dry land extends westward, where it attains its maximum width of a little more than 600 meters. There is a fairly wide, sandy beach on the

island's western side at this widest point; however, the surrounding inland area is low, flat, marshy, and very likely prone to periodic flooding (Figure 2-3).

Today, Long Cay is part of the Admiral Cockburn Land & Sea National Park (Department of Environment and Coastal Resources 2007). For years, the island was dominated by feral goats and housecats that had been left behind by squatters and itinerant fishermen. These animals decimated the indigenous vegetation and hunted to extirpation the island's native reptile species and migratory bird populations (Brian Riggs, personal communication 2004). Thanks to a decades-long eradication, restoration, and reintroduction program that began in the early 1970s, Long Cay is now a thriving wildlife sanctuary. Native rock iguanas (*Cyclura carinata*)—many exceeding a meter in length—now prowl the island as they must have for millennia (Figure 2-4). Sea birds have also reestablished seasonal rookeries on the rocks and cliffs.

The east (windward) side of Long Cay is high, rocky, precipitous, and constantly blasted by waves and sea spray thundering in off the Columbus Passage. There is no beach on the east side. It is uniformly an assortment of exposed rock face and boulders that plunge from an altitude as high as 50 meters directly to the sea, and from there off the shelf and into water a thousand meters deep (Figure 2-5). In general, the west (leeward) side of the island is flatter, although still somewhat elevated and hilly. It faces the calm, shallow Caicos Bank. In some places the west side looks like the east side—exposed rock and boulders that tumble steeply toward the sea. These areas break up the beaches and flat lands with soils so that suitable survey targets where people might have been able to live were dispersed and unevenly distributed across the western shore. The northern tip of Long Cay lies only 750 meters from the southern coast of South Caicos. Dove Cay, which is discussed below, is situated between the two. Between Long

Cay and Dove Cay is a channel known as Big Cut, which is deep enough to permit passage of large vessels and is the point of access through which all merchant traffic to the port of Cockburn Harbour, South Caicos must travel.

We surveyed Long Cay on May 21, 2004. There were two objectives for this survey. First, to rediscover a site that had been reported to the Turks and Caicos National Museum by Bob Gascoine and Jane Minty in the late 1980s. The site's GPS coordinates had been misplaced in the intervening years—a search of the Museum's records turned up a mention of a site on Long Cay but revealed no specific location or details. The second objective was to evaluate the rest of the island's lengthy leeward coastline to determine if other sites or activity areas were present. There are no beaches on the eastern coast, so we approached the island from the west. We began at the southern end of the island, and disembarked at the southernmost beach where it was possible to land the boat. Even then, it was a 20 minute hike to the southern extreme of the island. All of the sites and activity areas described below are shown on the map of Long Cay (Figure 2-6).

### **Survey results**

**LC-AA01.** Given our difficulty in finding a suitable beach upon which to land, I was surprised to discover two activity areas at the southern end of the island. Presumably, the ever-shifting sands of the Caicos Bank had altered the coastline in the intervening centuries. Whatever the cause, the first activity area we encountered lay approximately 400 meters south of where we disembarked. I named it Long Cay-Activity Area 01. LC-AA01 is a mixed historic- and prehistoric-era conch pile approximately 130 meters long. Modern conchs with the crescent-shaped kill hole were in evidence. However, the majority of shells were punched. The conch pile is divided by a limestone outcropping that juts into the water. Approximately 30 meters of

the conch pile lay north of the outcropping, which itself was about 20 meters wide; a further 100 meters of the pile lay south of the outcropping (Figure 2-7). The entire conch pile appears to be submerged at high tide. A walkover surface survey of the area abutting the conch pile yielded no artifacts or evidence of human activity. Moreover, the soils on the land around the conch pile appeared identical to the surrounding beach sand, and were not stained the familiar grey color associated with human occupation. Based on the evidence, I concluded that LC-AA01 was a conch collection and/or processing station with no associated settlement. There were also a number of smaller conch piles submerged just offshore the northern portion of the activity area (Figure 2-8), but given our time constraints we did not venture out to sample each of these to determine their antiquity.

**LC-AA02.** The second activity area we encountered lay approximately 400 meters south of LC-AA01. It consists of a prehistoric conch pile that lay above the high-tide mark directly above the shoreline. Several historic-era conch piles lay near LC-AA02 in the tidal zone. The prehistoric conch pile is roughly 40 meters long and 2-4 meters wide. There is a disturbed area adjacent to the conch pile. The area is about 20 meters square and is covered with a wispy, grass-like vegetation that stands in contrast to the thicker, surrounding bush (Figure 2-9). However, the soils were consistent between the activity area and the bush—always the light, sandy loam we usually recognize as sterile. Even though a thorough surface reconnaissance failed to yield a single artifact, I suspected a subsurface deposit and resolved to return with the proper equipment to conduct shovel tests. Unfortunately, we never made it back. Subsequent discoveries trumped our plans to return, and I was unwilling to stop excavating large, proven sites just to test a comparatively small and probably less significant area. Although LC-AA02 may turn out to be a habitation site, for now it remains a conch-processing activity area.

**LC-AA03 and LC-AA04.** After reaching the southern end of the islands, we turned around and ventured north. Approximately 1.3 km north of LC-AA01 we encountered another small prehistoric conch pile on the beach above the high-water line. LC-AA03 is about 5 meters by 3 meters in area. A further 1 km to the north, we encountered a similar feature (LC-AA04), also on the beach above the water line, and roughly the same size. Neither of these activity areas were associated with any cultural material. These are simple conch kill areas.

**The Spud site—LC-05.** I first saw Spud from the sea. As we neared the north end of the island, our progress was blocked by a steep, rocky abutment that ran across the entire width of the island and out into chest-deep water. I called the boat to take us around the obstacle. While we were on the boat we opted for lunch and a break. As the others finished eating, I scanned the coastline with binoculars for more coastal conch piles. When I panned to Spud, it stood out against the surrounding landscape so clearly that I knew I had found Bob Gascoine's site, even at a range of a thousand meters. "Spud" is so named because of its appearance from that distance. The soil is more exposed and the ground cover vegetation is lightly colored, except for a large clump of yellowish shrubs growing in the center of the site. With the contrast provided by the surrounding darker-colored bush, I observed "It looks like a giant baked potato, with butter on top." People chuckled, and the name stuck.

We landed after lunch and surveyed the shoreline between the rocky obstacle and Spud, finding nothing of interest. When we reached the site, it was immediately apparent that Spud was a large-scale occupation site (Figure 2-10). The soil was stained grey throughout, and almost black in places. Ceramics, crushed shell, shell tools, and coral abraders littered the surface (Figure 2-11). Some of this material was eroding out of the deposit and down a steep, 2 to 3 meter slope to the "beach" below, which is really only a narrow strip of tidally-submerged

sand. As such, there were shell tools and other cultural material strewn about at the waterline. I initially estimated the site's size at 70 x 30 meters—it turned out to be larger. We returned to excavate Spud the next week. A complete and detailed description of the site accompanies the excavation results in Chapter 5.

North of Spud, there is virtually no coastline. The island becomes an escarpment with cliffs on either side dropping rapidly into the sea. We walked as far as we could, and found no further evidence of human occupation. We boarded the boat, and trolled along the remaining coastline so I could scan what remained of the island with the binoculars for any features. I observed none, and we set off for our next target.

### **The role of Long Cay**

The presence of a site the size of Spud indicates that Long Cay played an important role in the prehistoric settlement pattern. Indigenous settlers recognized that Long Cay is strategically placed near a variety of marine environments, and they took advantage of it. To the west lay the flat, calm Caicos Bank and its mollusk resources. Given the number of conch processing activity areas we discovered, these were clearly (and predictably) a vital part of the local economy. Moreover, to the north, south, and east lay the reefs and open ocean habitats favored by fish, lobster, and other marine resources. A more detailed analysis of the role of Long Cay and the Spud site is presented in Chapter 5.

### **The Survey of Moxie Bush**

#### **Physical description and survey methodology**

A titular island, Moxie Bush is a 150 x 75 meter clump of mangroves with a forested, sandy interior that somehow stays dry at high tide (Figure 2-12). It covers an area of approximately 1.13 hectares (Department of Economic Planning and Statistics 2008b), and lies

about 750 meters west of the similarly mangrove-choked western coast of South Caicos (Figure 2-13). We surveyed Moxie Bush on May 21, 2004, immediately after the survey of Long Cay.

Moxie Bush is an interesting place. Nowhere else in the area can one gain such an appreciation for the degree to which the northeastern portion of the Caicos Bank is filling in. We arrived at absolute low tide. Even so, I was amazed to see that exposed sand stretched beyond the horizon (Figure 2-14). I am exactly six feet tall (1.8m), which means that my eyes are about 1.7m above the ground. Given the curvature of the earth, this places an object on the horizon 4.7 km distant from my location ([www.reference.com](http://www.reference.com)). Since the exposed sand went beyond that distance, I can only speculate how far the dry bank truly extends. As it is, 4.7 km is halfway from Moxie Bush to East Caicos. For the first time I truly appreciated the vagrant nature of the sands of the Caicos Banks.

Moxie Bush is also oddly beautiful. Once one hacks to its interior through the ring of dense mangroves, the island opens up. At its interior, it harbors large trees approaching 10 meters in height as well as a variety of other lush terrestrial vegetation. The island also supports numerous small lizards and an assortment of waterfowl. There is abundant shade and no sound but for the gentle calls of roosting birds. However, I highly doubt that it ever supported a human population. First, no signs whatsoever of prehistoric occupation were present. Second, even though the interior of Moxie Bush now remains dry most of the time, it is obvious that storm surges or extreme high tides regularly inundate the cay. This became increasingly apparent as we continued to encounter plastic bottles and fish net floats—even an old cooler—suspended in the canopy. Since flotsam was routinely perched as high as eye-level it is impossible to imagine that people would ever choose to live in such an environment.

## **The role of Moxie Bush**

It is unclear if Moxie Bush was even present a thousand years ago. Yet it is quite possible that the island's origin is tied to prehistoric activity. While motoring around the Caicos Bank, I observed a number of historic-era conch piles dotting the waters in the vicinity of South Caicos. Some of these had been colonized by mangroves, which use the piles for anchorage. Over time, it is reasonable to imagine these mangroves increasing in size and breadth. As they grow, more and more sand and shell material would become trapped in the increasingly dense array of mangrove roots, eventually creating a new island. Although we looked for (and did not find) a single conch in and around Moxie Bush, it is possible that we are seeing the result of a prehistoric conch pile, colonized by mangroves, sedimented by shifting sands, and fast-forwarded half a millennium.

Whatever the island's origin and life history, there is no percentage in wagering that prehistoric people ever lived there. If Moxie Bush were around in prehistory, it may have been visited occasionally by foragers seeking out the occasional bird egg or small reptile, or to pull a bonefish from among the roots of its mangroves. However even this seems unlikely, given the contrast between Moxie Bush's limited biomass and the whopping productivity of the bank and reef environments that are present no more than a few minutes' canoe ride away. Consequently, I argue that Moxie Bush played no significant role in the settlement pattern of indigenous peoples.

## **The Survey Of Dove Cay**

### **Physical description and survey methodology**

Dove Cay is a small island situated about 250 meters off the southernmost extreme of South Caicos. To the north and east of Dove Cay lie relatively shallow, conch-rich grass beds

and the southern shore of South Caicos. To the south and west of Dove Cay lies Big Cut, the shipping channel that sustains the modern economy of South Caicos. The northeastern extremity of Long Cay lay on the other side of that channel (Figure 2-15). Unlike Moxie Bush, there is no question as to the origin and antiquity of Dove Cay. It is part of the ancient geology around which the main islands of the Caicos Bank formed eons ago. Its bedrock and much of its elevated bulk consists of limestone—the remains of a Jurassic-period reef that once sealed the Caicos Bank from the Columbus Passage.

The long axis of the cay is oriented east-west. The island measures a total of 160 meters by 80 meters for a total area of 1.3 hectares (Department of Economic Planning and Statistics 2008b). However, very little of that area is suitable for human transit, let alone occupation. Like Long Cay, the island's windward side faces the pounding waters of the Columbus Passage. The leeward side is more sheltered, but given the island's precarious perch in the middle of the channel, it is still not easy to approach. There is a patch of relatively flat land in the center of the island, but it measures no more than 40 x 25 meters in area. From this relatively flat region the sides of the island slope precipitously into the sea in all directions. There is a very small beach on the island's leeward shore, but rocks and reefs preclude any attempt to park the bow of a boat there.

We surveyed Dove Cay on May 22, 2004. Given the island's small size, overall rockiness, and considerable slope, our expectations were not very high. However, we encountered a prehistoric conch pile right near the waterline as we came ashore. A sandy hillside on the northeastern side of the island sloped steeply from the water's edge to the island's comparatively flat, 40 by 25 meter interior. This hillside was darker grey in color, and littered with fire-cracked rock, fragmentary *Strombus gigas* shells, and the occasional expedient shell

tool. These cultural items were eroding out of the northwestern side of the island into the sea, and littered the tidal zone at the base of the hill as well. Dove Cay had been inhabited after all.

We embarked on an extensive survey of the flat area in the center of the island and of the peripheral hillsides, rock ledges, and beaches. No other evidence was discovered in these areas. The interior flat area was covered with a dense growth of salt-resistant grasses and a few clumps of stunted shrubbery. In contrast to the darker soil of the eroding hillside, soils in the flat area were a uniform light color associated with sterile beach sand. Moreover, no cultural items were in evidence on the surface. The site had evidently been covered by wind-blown sand, so that the only obvious signs of occupation were present in places where the deposit was exposed by erosion.

### **The role of Dove Cay**

My initial impression was that the Dove Cay site was nothing extraordinary. We were preparing to leave when Winn Phillips came running toward me cradling some object in his hands. It turned out to be the most spectacular single artifact that we recovered during the entire field school. In the eroding deposit, Winn had discovered an intact half of an imported ceremonial bowl. The vessel was decorated with an enigmatic incised-line motif that combined decorative and technological elements of both the Chican and Meillacan subseries. Moreover, two anthropomorphic forms, lying side by side, were applied to the vessel's single intact handle. While my excitement was tempered by Winn's haste in removing the item without first consulting anyone about provenience, clearly it was an important discovery, so I had him show me the precise location where he had first encountered it. The "twin pot," as it came to be known, immediately reframed my initial feelings about the island's potential usage. This unique

artifact seemed akin to items recovered from Pelican Cay, and I immediately resolved to conduct excavations at Dove Cay as a result.

## **The Survey Of Iguana Cay**

### **Physical description and survey methodology**

Here it is helpful to view the island of South Caicos as the locals do—as a giant soup ladle. The “handle” extends approximately 6 km on a north-south axis, while the “cup” juts 5.25 km westward at the southern end. Bell Sound is the portion of the Caicos Bank that lies in between; it inundates the area west of the “handle” and north of the “cup.” About halfway up the “handle” lay Iguana Cay, a tiny, 70 x 60 meter islet situated in Bell Sound approximately 100 meters off the western shore (Figure 2-18). The west side of the island is a rocky dome that rises approximately 10 meters out of the surrounding banks. The east end of the island is marshy and impassably choked with mangroves (Figure 2-19).

Iguana Cay was surveyed on May 25, 2004. The water around Iguana Cay is shallow, so we waded to the island from the nearby shore of South Caicos. As its name implies, Iguana Cay is replete with rock iguanas. They lay basking on the rocks by the dozens and seemed to occupy every nook and cranny of the island. Apparently they are not accustomed to seeing many people, for they showed not fear but curiosity, and frequently walked right up to us. They survive quite nicely on the island’s abundant cacti, which is one of their preferred staples.

Aside from the gregarious iguanas, we found little else. There was no evidence of human activity, save for a semi-circular arrangement of piled stones situated in the shallow water adjacent to the rocks on the southernmost tip of the island (Figure 2-20). This feature was intentionally constructed, perhaps as a pen or cage in which to temporarily store live conch or

fish. It is impossible to determine the antiquity of the feature—it could be a thousand years old, or less than ten. Consequently, I note it as a possible “conch crawl” of unknown origin.

### **The role of Iguana Cay**

The evidence suggests that Iguana Cay played no major role in the prehistoric settlement pattern of the region. However, the presence of the conch crawl in context with a thriving iguana population on the cay may be significant to this study of regional usage of small uninhabited cays. Perhaps Iguana Cay served as a sort of prehistoric “refrigerator” that helped ensure food security in difficult times. Consider this scenario: a tropical disturbance hits the region with heavy rains and high winds that make it too dangerous to venture out to open water for fish and conch. These conditions frequently last for several days. Under these circumstances, prehistoric peoples would run out of protein as fish and conch were consumed or gradually spoiled in the tropical conditions. If bad weather persisted, these could not be easily replaced. Enter Iguana Cay. People could easily get to the island in even the worst weather. They could harvest a few robust iguanas to get them through the tempest. Perhaps they also planned ahead when they saw that the weather was deteriorating and threw some conch in the conch crawl—these animals would further supplement the diet and get them through the storm.

Admittedly, there is no way to evaluate this hypothesis given the limited archaeological evidence. But as we Floridians know, hurricane preparedness is a part of life in the tropics. Is it unreasonable to think that indigenous West Indians would have been any less diligent in assembling a survival kit when bad weather approached? I suggest that we at least consider the role of islands like Iguana Cay in this context. Iguana Cay may not have mattered much in indigenous people’s daily life, but like that box of canned goods we keep in the closet, it may have become really important on particularly bad days between June 1<sup>st</sup> and November 30<sup>th</sup>.

Additional reconnaissance of islands like Iguana Cay will be necessary to test the validity of this hypothesis.

## **The Survey Of Horse Cay**

### **Physical description and survey methodology**

Horse Cay lay in Bell Sound almost exactly 500 meters north of the northern tip of the “ladle” of South Caicos (Figure 2-21). The cay is shaped like a rough oval, with its long axis situated within a few degrees of a precise north-south alignment. The cay measures 240 meters on this long axis, and is between 30 and 70 meters wide, for a total land area of 1.29 hectares (Department of Economic Planning and Statistics 2008b). Exposed limestone rising several meters above sea level lay at its interior, which means the cay can trace its geological heritage to the same platform as South Caicos, Dove Cay, and Long Cay, and is not a recent development like Moxie Bush. Moreover, the interior of the island is dominated by the same scrubby vegetation and cactus as the ancient islands. It has some smallish mangrove stands at its north point, and is flanked on its northwestern (lee) shore by a nice sandy beach that is 100 meters long and as much as 10 meters wide.

We surveyed Horse Cay on May 25, 2004, immediately after wrapping up our visit to Iguana Cay. Horse Cay is inaccessible via boat from Cockburn Town due to the silting in of portions of Bell Sound west of the island and north of South Caicos. Therefore, we drove to the nearest land approach, where we could see the island clearly from the South Caicos shore. However, no one could know how deep the intervening waters were, or how far away the island might actually lay on the horizon (I did not remember to bring the map). Given that we could not tell if we would have had to swim part of the way, we left all of our belongings in the truck

and only took water bottles on the adventure. Consequently, there are no photos of the site we would find on Horse Cay.

We waded across the half-kilometer gap in about 25 minutes. Upon arrival we walked north along the western beach. The eastern shore had no beach, only exposed rock that was lapped by the incoming tide. In short order we discovered evidence of prehistoric occupation. An easily discernible surface scatter of cultural material, including fire-cracked rock, fragmentary burnt conch, and several sherds of imported ceramics was lying in the open on the northern half of the lee beach directly adjacent to the water. This scatter extended some 40 meters along the shore. On the beach we only found a few very small sherds that were exclusively undecorated. Erosion had taken its toll on these artifacts and they were, in general, quite friable and so heavily abraded that no diagnostic decoration remained. Only the temper told us that they were the remains of imported vessels.

After examining the beach scatter, we turned our attention to the adjacent interior. The first feature we encountered was the relict foundation of a refuse midden situated above tidal maximum directly between the beach and the interior. At first it looked like ordinary beach rock. But upon closer examination, we found cultural material like conch tools and ceramic sherds literally “fossilized” in the fabric of the stone. Since Middleton Cay also features an extensive “fossil midden,” it is important to understand how these unique features are formed.

Fossil middens are caused by the unique chemical nature of anthropomorphic waste (Fernandez et al. 2002; Wells et al. 2000). As people pile organic material like plant matter, animal remains, and their own waste into a midden, carbon and other elements become concentrated in the feature’s matrix. Microorganisms feeding on the decaying material will release some of this carbon in the form of carbon dioxide. Rainwater then percolates through the

deposit, dissolving some carbon dioxide to create a weak carbonic acid. This acidic water will seep down and pool on the underlying limestone bedrock. Over time, the acidic water will dissolve some of the limestone, so that the base of the midden becomes a slurry of midden matrix and carbonate-saturated acidic rainwater. Eventually some of this dissolved carbonate will precipitate out to form a solid mass, in the same way as stalactites and other cave features are formed. This reforms the solid carbonate around whatever material happens to be at the base of the midden and traps it in the fabric of the reconstituted bedrock. If the overlying midden is eroded away—in this case, by wave action and the occasional hurricane—then all that will remain of the feature is exposed bedrock peppered with durable cultural materials like ceramic sherds and marine shells. While it is plainly impossible to excavate such a feature, one can still gain insight as to the timing and intensity of the associated occupation by considering both the dimensions of the fossil midden and the particulars of the cultural material entombed therein.

Horse Cay's fossil midden was approximately 8 meters long by two to three wide. Most of the cultural material trapped in the rock consisted of broken conch and expedient conch tools, with less than a dozen undecorated imported sherds in evidence. The site's occupation area lay directly behind this feature. The soil structure of the site was the familiar dark grey and stood in stark contrast to the light, sandy loam present on the rest of the island. Across the site we regularly encountered surface scatter of fire-cracked rock and burnt, cracked conch. We recorded 15 plain imported sherds and a single imported decorated sherd. It is a small rim fragment with the distinctive wet-clay, cross-hatch design of the Meillacan subseries. We also recorded three broken expedient shell tools and a single intact, small conch pick. All of the cultural material was confined to an area of about 60 by 20 meters, including the surface scatter

on the beach. A thorough reconnaissance of the rest of the island yielded a few round-hole conch but nothing else. No other middens were detected in a search that lasted nearly an hour.

My excitement with finding yet another Meillacan era small-cay site was tempered by a growing anxiety over the rising tide. None of us wanted to swim the half-kilometer back to South Caicos, and we were not equipped to spend the night. We left, and waded/swam through deepening, roughening water in about 40 minutes. Unfortunately, we would not return to Horse Cay. As mentioned above, the water west of the island is too shallow and hazardous to navigate by boat from Cockburn Harbor, South Caicos, and it would have been madness to try to wade to the island with all of our gear and supplies. As such, any interpretation of the role of Horse Cay must be based on our observations from the survey.

### **The role of Horse Cay**

Even with the limited archaeological evidence, it is possible to make a meaningful interpretation of the Horse Cay site. First, it appears to have been occupied earlier in prehistory. The Meillacan ceramics and the lack of any Palmetto ware strongly suggests that the site was abandoned sometime prior to the widespread distribution of locally-manufactured ceramics in the region. Granted, the sample size of sherds is quite small ( $n=16$ ), but if the site were occupied during the Palmetto period (AD 1200-1500), then one would expect to find some Palmetto ware in evidence.

A deeper consideration of Horse Cay's attributes reveals much about the site even though the material assemblage is largely mute. Three lines of evidence and reasoning lead me to believe that the site was more intensively occupied than the paltry assemblage indicates. First is the size of the site itself. At 60 by 20 meters, the Horse Cay site is spatially larger than many other small cay sites we examined (e.g. Gibbs Cay and the two Cotton Cay sites discussed in

Chapter 4). Second is the fossil midden. At 8 by 3 meters, it is quite large when compared to the middens I excavated at contemporaneous sites like Kendrick and Plantation on Middle Caicos (see Sinelli 2001). Moreover, the processes that form these fossil middens take time. Since trace amounts of carbonic acid in rainwater simply cannot dissolve limestone overnight, people would have had to regularly pile up debris for quite a few years to achieve the degree of preservation that we observed. Unfortunately not enough is known about this process to establish with certainty the duration of the associated occupation. The third reason I believe that Horse Cay was more intensively occupied than the evidence suggests is the low profile of the island itself. No point of Horse Cay lies more than a few meters above high tide. Consequently, the island must be inundated on a fairly regular basis, which makes it likely that the archaeological deposit of Horse Cay has mostly washed away and now lay scattered across Bell Sound. Recall Moxie Bush, which is less than 5 km southwest of Horse Cay in the same body of water. The tidal surges that placed the water-borne debris at eye-level in the Moxie Bush canopy would have nearly or completely submerged the entire mass of Horse Cay. The relict midden further demonstrates the effects of erosion—whatever was on top of that feature has long since vanished. Moreover, we did not encounter a single iguana or other terrestrial creature on the island, even though we expected to given Horse Cay's isolation and our experience at Iguana Cay. Reptiles, if they ever did colonize the island, would be extremely vulnerable to these tidal surges, particularly since Horse Cay lacks the elevation of Iguana Cay and the taller trees found on Moxie Bush that would provide refuge from high water.

When viewed in its totality, the available evidence suggests that Horse Cay played a more substantial role in the prehistoric settlement pattern than can be appreciated through the

available archaeological evidence. I more fully elaborate on the possible role of Horse Cay and its possible relationship to other sites in the area in Chapter 5.

## **The Survey Of Six Hills Cays**

### **Physical description and survey methodology**

The Six Hills Cays are the most remote of the small cays we surveyed. They are situated 10 km southeast of South Caicos and are so named for the profile they cut on the horizon when viewed from that island. The cays appear to have six “hills,” which upon closer inspection are rounded limestone outcrops elevated over the surrounding terrain.

Geologically, Six Hills Cays are the limestone remnants of an ancient reef that has since been beaten down by the persistent wind and hammering waves. Six Hills Cays consist of two long, narrow islands stretching a combined 2 km from west to east, along a west-southwest to east-northeast bearing. Together the islands measure 9.14 hectares in area (Department of Economic Planning and Statistics 2008b). The western island is approximately 900 meters long; the eastern, about 700 meters. These main islands undulate in width from as much as 75 meters to as few as 15, so that when viewed from above they look like a python that has eaten a series of hamsters (Figure 2-22). A small, rocky remnant of the original formation, no larger than 20 meters square, lies in the 200-m-wide gap between the two main land masses, and stands as silent testimony to an era in which the two main islands were linked. The waters surrounding the Six Hills Cays are deeper than those around any other cay that we surveyed on the Caicos Bank, averaging 8-12 meters. Perhaps this partially accounts for the fact that no beaches more than a few meters wide are to be found anywhere along the islands’ perimeters.

We surveyed Six Hills Cays on May 28, 2004. The islands were among the most difficult to survey. First, there is no good approach to either of the big islands. After circumnavigating

both of the big islands, our driver managed to reconnoiter a “beach” on the northwestern side of the western island that had fewer dangerous rocks than any other spot. We disembarked into waist-deep water, and once we hit the shore we had to pull ourselves up a sheer, chest-high rock ledge and scramble up the side of a steep, rocky hill to get our bearings.

Most of the time our transit around the western island was restricted to near the shore by immense expanses of dense cacti (Figure 2-23). These plants seem to be the only vegetation that thrives in Six Hills Cays, which we found to be primarily exposed limestone with very little surface soil to retain the moisture that other plants require. Colluding with the cacti to hinder our progress were steep slopes, impassable chasms, and sharp, shifting rocks that routinely threatened to toss us either into a cactus stand or off a cliff into the sea (Figures 2-24 and 2-25). In short order we realized that this was not the kind of environment that indigenous peoples would have likely chosen to call home.

At times, the local wildlife was as unwelcoming as the terrain. Six Hills Cays are part of the Admiral Cockburn Nature Preserve and are designated as a refuge for resident and migratory sea birds. We encountered quite a variety of birds, including brown pelicans, several species of gull, sooty terns, and even a nesting osprey. Most avoided us, but the sooty terns were tending eggs and seemed unnerved by our sudden and unexpected appearance and dove at us on occasion. But by far, the osprey was the least hospitable Six Hills resident (Figure 2-26). She reared up from her nest, spread her wings wide and screeched when we stumbled over a rise to within 10 meters of her nest and surprised her. Interestingly we did not encounter any iguanas, even though the topography is a great deal like that of Iguana Cay, albeit much larger, and there was enough cactus on the island to support legions of these reptilian vegetarians. The only

terrestrial vertebrates we saw were small lizards, and even these were fairly rare. It seems that Six Hills Cays are literally and figuratively “for the birds.”

We surveyed as much of the western island as we could and found nothing of interest, save a historic-era conch pile at the western extreme of the island (Figure 2-27). No prehistoric conchs were detected in the pile, so we departed for the eastern island. Conditions there were identical to those we encountered on the western island. Nevertheless, we surveyed as much of the eastern island as we could, and discovered nothing. We did not attempt to land at the small central island because it is little more than a big, steeply-sided rock that would require rappelling gear to survey.

### **The role of Six Hills Cays**

Six Hills Cays have virtually none of the attributes that attracted indigenous settlements. There are no good beaches for landing and securing canoes, there are no soils to speak of, and finding a flat piece of land upon which to erect a house would be a challenge. Yet the seas around Six Hills Cays are filled with rocks and reefs that harbor abundant marine life. Today the waters around Six Hills Cays are regular stops for tourists and sport anglers seeking grouper and snapper, as well as the bigger pelagic predators who come in to feed on the reefs (Turks & Caicos Tourist Board 2007). In prehistory, these reefs probably attracted the attention of indigenous fishermen as well, and it follows that they may have occasionally set foot on the islands to rest, eat, or seek shelter from a sudden squall. Beyond that, there is no evidence that these islands played any significant role in the prehistoric settlement pattern.

## **The Survey Of Plandon Cay**

### **Physical description and survey methodology**

Plandon Cay is the barrier island that lay immediately north of the northern tip of the “handle” of South Caicos. Compared to the small cays discussed thus far, Plandon is a large island, encompassing 21.63 hectares (Department of Economic Planning and Statistics 2008b). The island is approximately 1.1 km in length from north to south but is fairly narrow. Plandon is widest (about 250 m) at the southernmost part of the island, but it tapers as one moves northward so that the northern half is rarely more than 150 m wide. It is separated from the northern tip of South Caicos by a cut that is 250 m wide and 10 m deep at its maximum. Currents in the cut can be strong; a good portion of the waters of the northeastern portion of the Caicos bank flow though this channel with each tide.

Plandon is different than any of the other cays we surveyed in that its good, wide beach is on the windward (east) and southern side of the island. Extensive dunes, some of which are 5-8 meters high, lie just behind the windward beach. Immediately behind the dunes, the landscape turns to salina, which is submerged at high tide and exposed at low tide. There are some mangrove stands in the salina, which are densest on the southwestern side and become smaller and more scattered as the island tapers northward. Otherwise, the vegetation consists of little more than sea oats, a few cactus, and the occasional clump of stunted shrubs dispersed among the dunes. The northern fifth of the island is nothing more than a 50 to 70-meter-wide spit of land with beach on the east, sea oat covered dunes in the middle, and the expansive, featureless flats of the Caicos Bank on the west.

Geologically, Plandon is part of the ancient reef that forms the limestone spine of South Caicos and Dove and Long Cays to the south and Middle Creek Cay to the north. Yet for some

reason Plandon lacks the high escarpments of its neighbors. Limestone is intermittently visible at the base of the dunes all along Plandon's length, yet the dunes themselves are the most elevated parts of the island. This is quite a contrast to the 50-meter-high limestone "mountains" of the surrounding cays, and certainly has made Plandon far more vulnerable to storm surges throughout its history.

We surveyed Plandon on June 2, 2004. We had tried to survey Plandon and the surrounding cays two days earlier, via boat. Like Horse Cay, an eastern approach to Plandon through the Caicos Bank is blocked by shallow water and other hazards, so the only way to get there is to approach from the east (windward) through the open waters of the Columbus Passage. Things went well until about 30 minutes into the trip, when the boat's fuel filter clogged and engine began to sputter. We limped back and spent the remainder of the day excavating Spud.

We were scheduled to leave South Caicos three days later, but a new fuel filter would not be in for a week. I very much wanted to see the site on Plandon Cay that Brian Riggs had discovered some years earlier, so I devised an alternative plan. The survey team and I would drive to the north end of South Caicos and float across the channel to Plandon Cay. From there we could survey Plandon, then float across the next channel to survey Middle Creek Cay to Plandon's north. Had I known then that the locals avoid these channels "due to rough sea conditions and the prevalence of sharks" (Tupper and Rudd 2002:485), I might have reconsidered. But fortunately for us, the swim was largely uneventful.

Brian Riggs had given me GPS coordinates for the site and we found it quickly. It is located on the southern shore of the island where Plandon is widest and the windward beach wraps around to the south. The site lay immediately adjacent to the beach in a flat area that lay no more than a meter above the high water mark. Its most obvious features are several

prehistoric conch piles, none of which exceeded 8 x 3 x .5 meters in dimension, arrayed at the top of the beach between the water line and permanently dry land. Beyond that, it was difficult to determine the site's size or layout. There were no distinct soil anomalies, and there was no surface scatter of cultural material or ceramics that would offer a clue as to the timing of the occupation. Given the sparse evidence, I can imagine two scenarios to describe the occupation of Plandon Cay. First, the site was little more than a conch processing activity area, akin to those we discovered on Long Cay. Alternatively, the site was more intensively occupied, but the deposit has been buried by sand and/or eroded away by overwash. It is impossible to determine which of these scenarios is valid without further subsurface testing, but given the site's low profile and Plandon's overall vulnerability to tidal forces, it is difficult to imagine that whatever deposit there was had not been substantially impacted by ocean surges and erosion. Unfortunately it was our last day on South Caicos and we could not return to test these hypotheses.

After we examined the site, the team turned our attention to surveying the remainder of the island. Since the southwest side is mangroves and salina, we focused our efforts on the windward shore where the beach made transit easier. We walked along the beach and took turns in pairs exploring the interior of the island in and behind the dunes at 100 meter intervals. No evidence of prehistoric occupation was observed. We did find, however, all manner of interesting historical artifacts washed up along the otherwise gorgeous beach, including an old navigational buoy, a Russian vodka bottle with Cyrillic lettering, a variety of fish net floats, hundreds of lengths of broken polyester rope, and at least half a million plastic containers of all descriptions. At the northern tip of Plandon Cay we encountered two clapboard shacks (Figure 2-28). No one was home, and there were no items in the shacks to help identify who built them

or why. At the time I thought that they may have been erected by local fishermen as a place to rest during the heat of the day. Brian Riggs (personal communication 2004) later clarified that there had been a recent surge in illegal immigration from Haiti as people fled to the Turks & Caicos to escape the desperate conditions there. It was sobering to consider how bad things must be in the western hemisphere's poorest nation if a shack on Plandon Cay was considered an improvement.

### **The role of Plandon Cay**

The site at the southern end of the island is clear evidence that Plandon Cay somehow figured into the prehistoric settlement pattern of the region. However, given the near-total lack of surface features and the fact that we were unable to conduct any subsurface testing at the site, it is impossible to know the extent to which Plandon Cay was occupied by the indigenous peoples, who lived there, or even when the Plandon Cay site was active. We were able to establish that no other sites were evident on the island, although it is conceivable that other sites were destroyed by erosion or buried under the dunes. In any event, it is not possible to know how, when, or by whom Plandon Cay was utilized in prehistory. Thus it seems prudent to exclude Plandon Cay from this analysis of indigenous settlement strategies.

### **The Survey Of Middle Creek Cay**

#### **Physical description and survey methodology**

Middle Creek Cay lay 350 m north of Plandon Cay. The cut between the two islands is larger, deeper, and has a stronger current than the channel between Plandon and South Caicos (Figure 2-29). Almost exactly in the middle of the cut is an angular limestone monolith that juts out of the water to a height of some 20 meters. It bisects the cut into two separate channels, and

the narrow beach at its leeward base offered a welcome rest stop during our rafting adventure from Plandon to Middle Creek Cay.

Middle Creek Cay extends approximately 1.5 km along its north-south axis and ranges in width from 150 meters in the south to almost 500 meters in the north. With an area of 46.47 hectares, it was the largest “small” island we examined on the Caicos Bank (Department of Economic Planning and Statistics 2008b). The limestone ridge, so noticeably absent on Plandon Cay, returns with a vengeance on Middle Creek and runs the entire length of the island from north to south, exceeding 40 meters in elevation in places. The cliffs fall directly into the sea on the southern half of the windward (east) side of the island, which makes it impossible to walk along the eastern shore from a southern approach. However, the cliffs retreat inland along the northern half so that a wide sandy beach lay between the cliffs and the Columbus Passage. Lamentably, there is no way to reach the beach from the island’s interior—the cliffs are too precipitous to safely climb down. The leeward (west) side of Middle Creek Cay is heavily fortified with mangroves that delineate the border between Middle Creek’s leeward coast and the vast expanse of the tidally-submerged banks. A narrow, dry salina runs between the mangroves and the island’s elevated interior, allowing easy passage along the flat, stable ground. As one moves north along the leeward salina, the mangroves become even more dense and the entire northwestern shore becomes a giant mangrove swamp. It is impassable—there is no way through it and transit around is blocked by swampy salina mud on the west and nearly vertical limestone cliffs on the east. Essentially, Middle Creek Cay is a dead end for those on foot—there is no way to make it around the natural obstacles to the north side of the island.

The vegetation on Middle Creek Cay is more lush and diverse than that of the other islands in the area. For example, we encountered a large palm forest with trees 8 meters high on

the western side of the escarpment in the piedmont between the salina and the cliffs. Nearby, we ate lunch under the shade of a large mahogany tree. There are also lignum vitae and gumbo limbo trees. Overall, the vegetation of Middle Creek Cay resembles more closely the ecologies of the wetter Caicos islands to its north and west than the drier, salt-producing islands to its south and east. Moreover, iguanas and lizards were widespread, as were shore birds and other waterfowl roosting in the mangroves and among the rocks on the cliffs.

We arrived at Middle Creek Cay after a 45 minute swim from Plandon that included a break at the monolith in the center of the channel. As described above, all land passage from the island's southern tip to its eastern shore is blocked by the cliffs that fall directly into the sea. So, we began the survey along the leeward (west) coast. We walked along the flat salina between the piedmont and the mangroves, once again ducking into the interior in pairs at 100 meter intervals. No evidence of prehistoric occupation was discovered, although we did manage to spook more than a few iguanas. After about 900 meters, our passage was blocked by the impenetrable mangrove swamp. We tried to get around it for at least half an hour but only encountered more mud and more mangroves. Eventually we gave up and retreated southward to determine if a passage could be made over the escarpment and down to the eastern shore.

There were several places along the piedmont where the cliffs were broken up by steep, yet climbable hills. We found a broad pass that allowed fairly easy passage to the top of the escarpment. The view from the top of Middle Creek Cay is one of the most stunning vistas I have ever experienced in the Turks & Caicos Islands (Figures 2-30 and 2-31). Unfortunately, the cliffs to our east were so steep that we could find no place to safely attempt a descent to the beach below. In the distance to our west we noticed a small patch of green island on the bright white sands of the exposed banks. In what was arguably my biggest lapse of judgment of the

entire project, I decided we should walk out to it. We enjoyed the scenery for a few more minutes, then scampered down the hill through the piedmont, past the mangroves, and out into the flats for what would become a Bataan-like march to Riley Rock.

### **The role of Middle Creek Cay**

Our surveys yielded no evidence of prehistoric usage of Middle Creek Cay. In fact, we encountered no evidence for any human activity—not even a single killed conch shell. This is probably due to the physical nature of the island’s shoreline. The entire northern side of the island is a muddy, mangrove-choked swamp. People certainly did not live there. Neither were they likely to have lived on the beaches along the northeastern (windward) side. Regional settlement theory holds that the windward coasts of islands in the region were never favored for intensive settlement by indigenous peoples, presumably because they are too exposed to the elements and the surrounding waters are too rough. Although the beach on the northeast side of Middle Creek is beautiful and inviting, it is certainly prone to flooding during high tides and storms, much like the windward beaches that abut the eastern side of the escarpment of South Caicos. Granted, we could not survey this area of Middle Creek Cay, but given the lack of any other sites known to exist in similar contexts in the Turks & Caicos, it is unlikely that any await discovery in this area. Finally, the western (leeward) side of Middle Creek Cay is equally uninviting. Almost all of the leeward shoreline is either a mangrove swamp or abuts the tidally dry sands of the Caicos Bank. Neither situation is conducive to canoe traffic. In fact, the only navigable water anywhere on Middle Creek lay directly to the south of the island in the channel between it and Plandon. If anyone were to establish a site on the island, their only choice would be at the southern tip adjacent to the channel, and no evidence for prehistoric occupation was

discovered there in spite of our intensive survey. Indigenous people, it seems, did not choose to live on Middle Creek Cay.

Even so, I argue that Middle Creek Cay could have been an important resource to the region's earliest inhabitants. As discussed above, Middle Creek appears to be the southern-most island upon which certain kinds of moisture-dependent vegetation are found. The palm forest would have provided timbers for structures and thatching for roofs. The mahogany and lignum vitae would have been valuable for structural members and to construct wooden implements like barbacoa racks, cooking utensils, canoe paddles, and perhaps even ritual artifacts. Finally, the vast mangrove swamps could have provided enough firewood and charcoal to last a lifetime. In summary, while it is easy to understand why people would have chosen not to live at Middle Creek Cay, it is difficult to imagine them ignoring the valuable resources the island had to offer.

### **The Survey Of Riley Rock**

#### **Physical description and survey methodology**

Riley Rock is a 50 by 40 meter limestone outcropping that pops out of the barren plain of the northeastern Caicos Bank like an emerald on a starched white sheet. It is approximately 0.2 hectares in area and is dome-shaped, with a maximum elevation about 6 meters above the high tide mark. The island lay 1.8 km from Middle Creek Cay, and only 1.1 km from the southern coast of East Caicos. About half of the distance between Riley Rock and Middle Creek Cay is exposed at low tide, but the mucky, wildly crenulated sands make walking difficult (Figure 2-32). For the remainder of the distance, the bank is submerged by water that averaged about 30 cm deep. This compounded the difficulty given the soupy, undulating nature of the bottom. It took us an hour and a half to reach the place.

From an archaeological standpoint, Riley Rock is insignificant. There was no evidence that anyone other than us had ever attempted to visit there. The island is much smaller than it appears from a distance, has no discernible soils, and only scrubby, low, salt-tolerant vegetation. Yet somehow a considerable population of rock iguanas manages to survive on the island. We counted more than twenty of the creatures, many more than a meter in length, suggesting that parts of Riley Rock remain dry during even the highest tidal surges. This fact was actually helpful in the final analysis, in that it provides some context as to the range of tidal flooding and storm surges in this area of the Caicos Bank.

After a brief but thorough survey, we departed Riley Rock. A journal entry I made at the time succinctly describes our mood at that point: “Saw an island and walked to it. TOO FAR! No site, found iguanas. Now we have to go back.” On the way back we made a quick stop to examine an odd limestone formation near Riley Rock (Figure 2-33). The presence of fish-net flotsam snagged on the top of this 2 meter tall “mushroom” formation provided additional insight into the range of water levels in the region.

### **The role of Riley Rock**

Given its inaccessibility, I argue that Riley Rock played no role in indigenous settlement patterns. Yet our adventure there was instructive. If an iguana population can thrive on this island, then at least some part of it must remain dry and sheltered in even the worst of tempests. From 1752 to 2007, 28 hurricanes and tropical storms severe enough to be noted in the historical record for the damage and/or loss of life they caused have impacted the Turks & Caicos (Sadler 2007). Some of the more recent ones have been monsters. In the September, 1945 hurricane, “The U.S. weather station on South Caicos, before being destroyed, recorded winds of over 150 MPH” (Sadler 2007). In 1960, Hurricane Donna pounded the Caicos Islands, left half the

population homeless, and destroyed what was left of South Caicos' salt industry. In 1985, the eye of Hurricane Kate passed over Grand Turk and then the Caicos, destroying all of the crops on Middle and North Caicos and wrecking the town of Bottle Creek, North Caicos (Sadler 2007). Yet through it all, Riley Rock's iguanas survived. This suggests that even the most devastating storms do not produce surges in the Caicos Bank in excess of 6 meters. Very likely, this explains why middens at sites like Horse Cay, Plandon Cay, and Middleton Cay were destroyed while those on Dove Cay and Long Cay survived.

### **Conclusion**

This survey indicates that small cays of the Caicos Bank played an important role in the settlement strategies of the region's early indigenous colonists. In the vicinity of South Caicos, there are more sites on the surrounding small cays ( $n=5$ ) than there are on the big island of South Caicos ( $n=2$ ). Moreover, several of the small cay sites are big—physically larger and more archaeologically substantial than all but a few of the dozens of known sites in the Caicos Islands. This topic will be thoroughly explored in Chapter 7, in context with the results of the rest of the surveys and excavations.

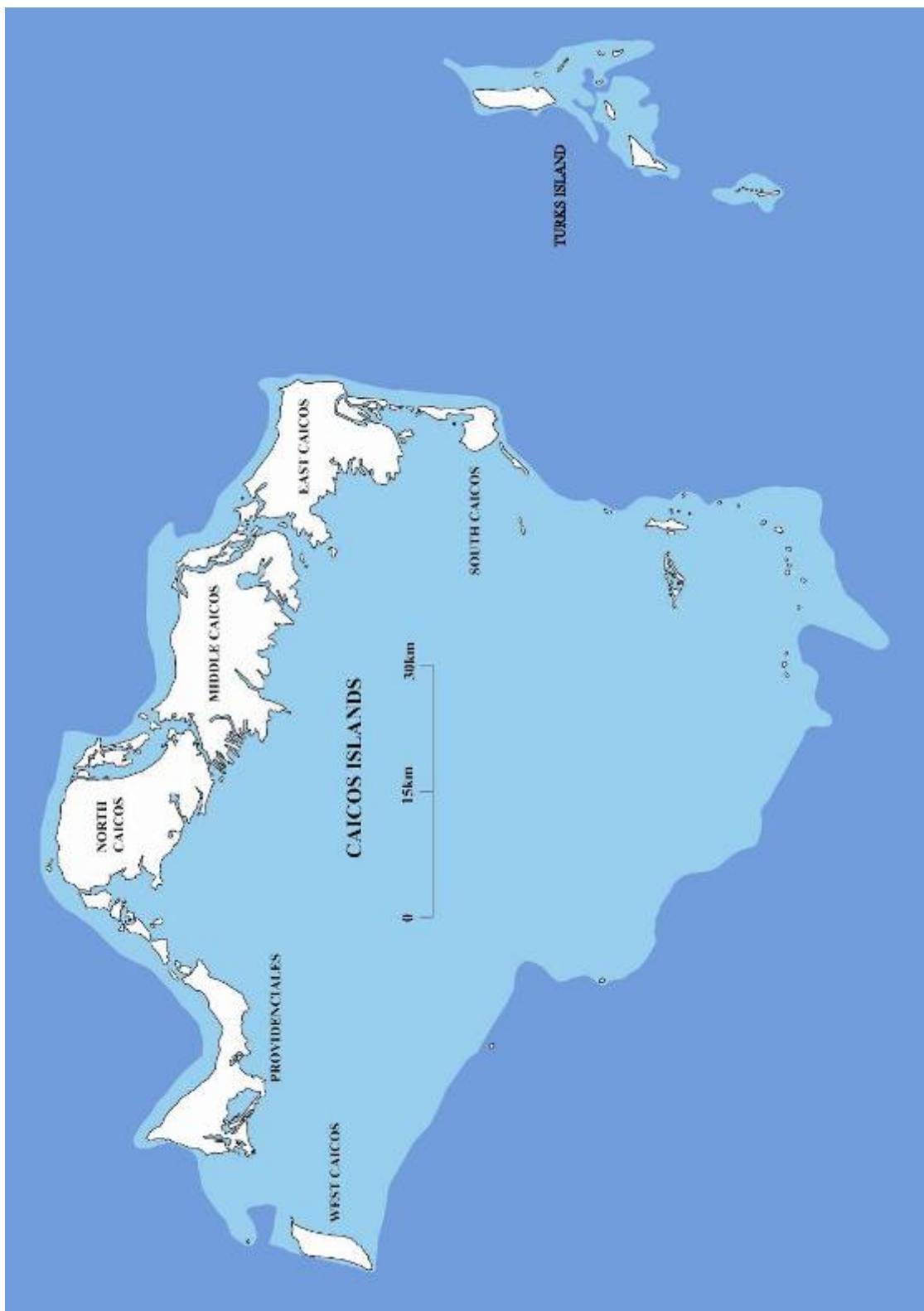


Figure 2-1. Map of the Caicos Bank and associated land masses.



Figure 2-2. Aerial photo of Long Cay, as viewed from the north.



Figure 2-3. Marshy area of Long Cay.



Figure 2-4. One of the many rock iguanas (*Cyclura carinata*) of Long Cay.



Figure 2-5. The windward shore of Long Cay. For a sense of scale, consider that the waves breaking against the rocks that day were 10 to 12 feet high.

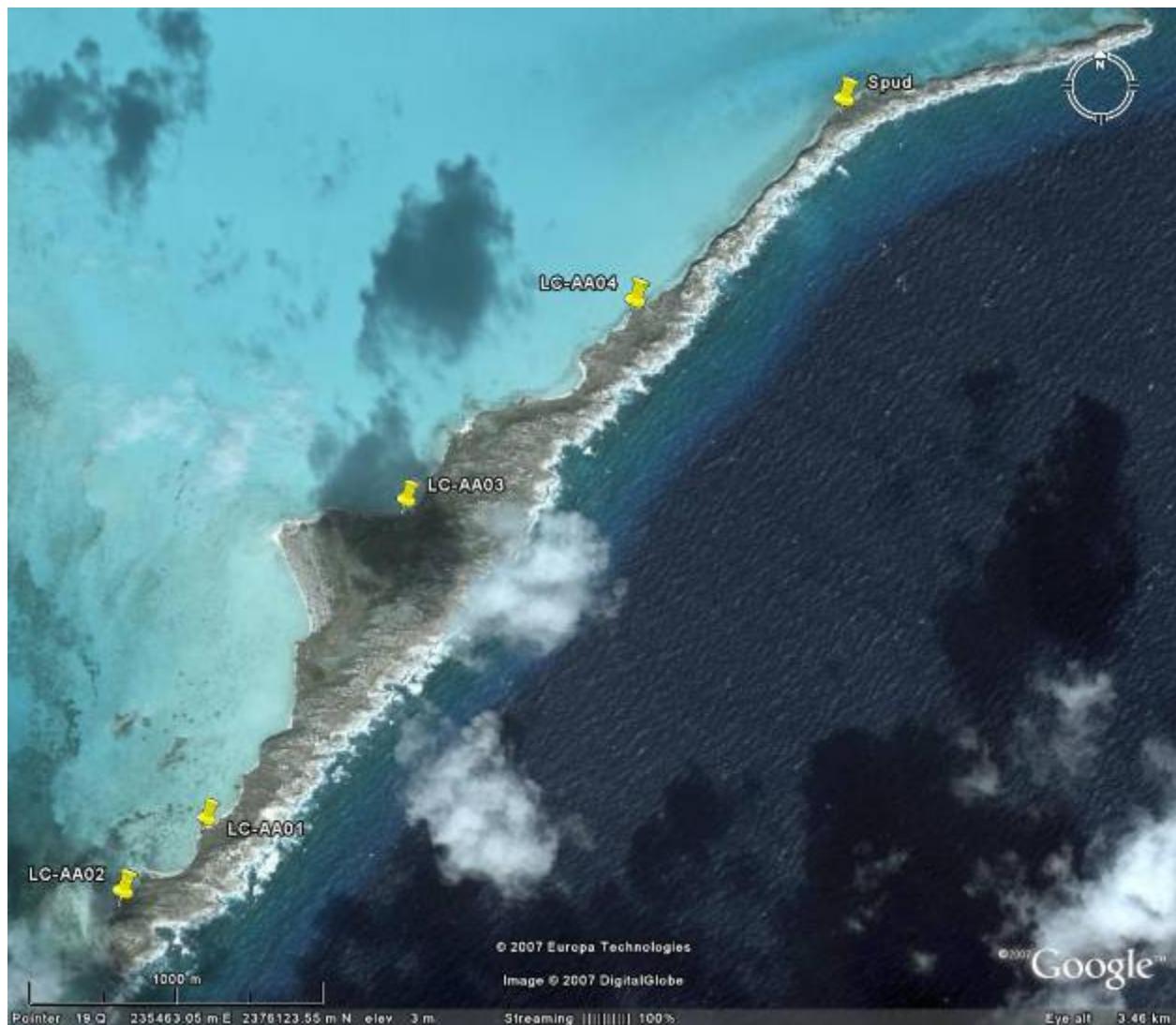


Figure 2-6. Satellite view of Long Cay showing sites and activity areas discovered by the survey. Map created in Google Earth.



Figure 2-7. The conch pile assigned designation LC-AA01, as viewed from the south. Note the limestone outcropping in the center background and light-colored soil at far right.



Figure 2-8. Higher-elevation view of submerged conch piles associated with the northern end of LC-AA01.



Figure 2-9. View of LC-AA02. The prehistoric conch midden lay above the high tide line. Note historic-era conch middens in the right background, and the difference in vegetation between the activity area and surrounding bush.



Figure 2-10. View of Spud, facing north. Note the color contrast between the vegetation.



Figure 2-11. The surface scatter at Spud. Note the shell tools, ceramics, and abundance of fire-cracked rock.



Figure 2-12. Moxie Bush, viewed from the south.



Figure 2-13. Satellite view of Moxie Bush (left center) with relationship to South Caicos (at right). Image created in Google Earth.



Figure 2-14. Photo from the east shore of Moxie Bush facing north. The dry sand extends beyond the horizon, which is nearly 5 km distant.



Figure 2-15. Satellite view of Dove Cay (center) with relationship to South Caicos (upper right) and Long Cay (lower left). Image created in Google Earth.



Figure 2-16. Satellite view of Iguana Cay with relationship to South Caicos. Image created in Google Earth.



Figure 2-17. Photo of Iguana Cay, facing west from the shore of South Caicos.



Figure 2-18. The “conch crawl” of Iguana Cay.



Figure 2-19. Horse Cay and its relationship to South Caicos. Image created in Google Earth.



Figure 2-20. The undulating coastline of Six Hills Cays. Image created in Google Earth.



Figure 2-21. One of the many dense stands of Six Hills Cays cactus.



Figure 2-22. Pete Sinelli negotiating the steep, barren cliffs of the western island of Six Hills Cays. The water is a sheer 8m drop from this position.



Figure 2-23. Matt Kear surveying Six Hills Cays. Note the sooty terns and the steep, inaccessible coastline of the island's southern shore in the background.



Figure 2-24. The magnificent female osprey guarding her nest, located just behind and below her, from the intruding archaeologists.



Figure 2-25. The historic-era conch pile at the extreme western end of the Six Hills Cays.



Figure 2-26. The shacks on the northernmost tip of Plandon Cay.



Figure 2-27. Preparing for the swim from Plandon Cay to Middle Creek Cay. From left to right, field school participants Jen Riley, Tiffany Cosgrove, and Winn Phillips. Middle Creek Cay is in the background.



Figure 2-28. View from the top of Middle Creek Cay, facing northeast. McCartney Cay lay in the center background.



Figure 2-29. View from the top of Middle Creek Cay, facing northwest. Note the palm forest and large trees in the lower left, and the mangrove swamp in the center background.



Figure 2-30. Crossing the flats between Middle Creek Cay and Riley Rock.



Figure 2-31. Pete Sinelli surveying the “mushroom” feature near Riley Rock. A thorough reconnaissance found no sites, but the tangled blue fishing net provides some insight into the range of tidal surges in this area.

## CHAPTER 3

### THE TURKS BANK SURVEYS

This chapter describes the surveys of cays situated on the Turks Bank. As in the previous chapter, I begin with a review of the geography, physical nature, and biology of the Turks Bank and its islands. Next I briefly discuss the logistical and theoretical considerations that helped shape the parameters of the survey and review the methods and strategies we employed. Thereafter, I discuss the survey of each island in detail, and conclude each discussion with an interpretation of how each individual piece may have fit into the larger regional picture.

#### **Geographical, Physical, and Biological Descriptions of the Turks Bank**

##### **Geography Of The Turks Bank**

With an area of 607 square kilometers, the Turks Bank is the smallest of the three banks in Turks & Caicos territorial waters (Keegan et al. 2008:Table 1). Ten named islands with a total land area of 26.7 square kilometers are dispersed somewhat randomly across the bank (Figure 3-1). Grand Turk is the largest island in the group, and also the most densely populated. It measures 17.39 square kilometers in area, but much of the island's interior is abandoned salt-industry ponds that are flooded at each high tide. Grand Turk has been the seat of the Turks & Caicos Islands government for centuries and supports a population of around 6,000 permanent residents (Department of Economic Planning and Statistics:2008c). Until recently, Grand Turk attracted around 10,000 tourists annually, most of whom were adventure-seeking SCUBA enthusiasts drawn to the island's stunning wall dives, laid back atmosphere, and quirky colonial charm. However, the island was instantly transformed into a major destination in February 2006 with the opening of the Grand Turk Cruise Terminal, and now more than 300,000 visitors drop in each year (Department of Economic Planning and Statistics:2008d).

Salt Cay is the second largest island in the Turks group, and the Turks Bank's only other land mass with permanent residents. Presently 114 souls call Salt Cay home (Department of Economic Planning and Statistics:2008c). Salt Cay has a total area of 6.74 square kilometers, but as with Grand Turk, this figure is deceptive. Much of the island's interior is covered in decrepit salt distillation ponds, and most buildings and homes are situated on a narrow strip of land between these ponds and the island's western shore. When combined, Salt Cay and Grand Turk account for more than 90% of the total land mass on the Turks Bank.

The remaining 8 named islands on the Turks Bank are currently uninhabited, although that has not always been the case historically. Cotton Cay was intensively farmed during the Loyalist plantation era (circa 1790 to 1820), and Big Sand Cay, Pinzon Cay, and Gibbs Cay bear limited evidence of historic activity. The remaining islands of Long Cay, Pear Cay, Penniston Cay, and Round Cay were never settled in historic times.

Five of the Turks Bank cays are protected under the umbrella of the Grand Turks Cays Land & Sea National Park. Gibbs Cay, Long Cay, Penniston Cay, Pear Cay, and Pinzon Cay are owned by the government, are protected from development, and land access is allowed by permit only (Department of Environment and Coastal Resources 2008). However, Gibbs Cay is a bit of an exception. Tourists on Grand Turk have been day tripping there for years. They enjoy the beautiful beach and snorkel and swim with the tame stingrays, who are so accustomed to people (and a free lunch of conch parts, courtesy of the tour boat driver), that they swim by the dozens right up to the boats as they approach. With the opening of the Cruise Terminal in 2006 there was some concern that Gibbs Cay would be overrun by tourists and its friendly stingrays driven off by the commotion. Fortunately, Government established strict limits on the number of

tourists and tour boats permitted to visit the island each day (Mitch Rollings, personal communication 2004), which should preserve this unique habitat well into the future.

### **Physical Description of the Turks Bank**

There are considerable differences between the Turks Bank and the Caicos Bank. Overall these differences conspire to make the Turks Bank far less productive than its western neighbor, and consequently, less attractive to prehistoric settlers.

The first and most obvious difference is size. At 607 km<sup>2</sup>, the Turks Bank is only 8.9% as large as the Caicos Bank (Keegan et al. 2008:Table 1). Even if the Turks Bank and Caicos Bank were identical in all other respects, the size difference alone would translate into more than a 90% reduction in total marine resource availability. Moreover, the Turks Bank has a greater average depth. The waters of the eastern half of the bank range in depth from 12 to 30 meters, which makes it more difficult to collect bottom-dwelling marine resources like conch.

The second difference is the degree to which the Turks Bank is protected from the open sea. Geographers classify the Caicos Bank as “Sheltered” and the Turks Bank as “Fully Exposed” (Keegan et al. 2008:Table 1). The Caicos Bank is viewed as such because a series of contiguous islands and/or a fringing reef system abut more than three-quarters of its 375 kilometer perimeter. In contrast, the Turks Bank has neither a fringing reef system nor any contiguously arranged land masses along its 137 kilometer perimeter (Keegan et al. 2008:Table 1). Consequently, the only reliably calm waters on the Turks Bank are found adjacent to the lee (western) shores of its islands. Because the Turks Islands are much smaller than the Caicos (26.7 km<sup>2</sup> versus 589.6 km<sup>2</sup>), and Grand Turk and Salt Cay account for 90% of the Turks Bank’s total land mass (Department of Economic Planning and Statistics:2008b), there is a lot less land available to create a calm lee area in the first place.

A third factor is where the islands are positioned on the bank. Grand Turk and Salt Cay lie on the extreme western edge of the geological platform that forms the Turks Bank. The lee beach of Grand Turk is rarely more than 600 meters from the wall that drops precipitously to depths exceeding 3000 meters. On Salt Cay, the shelf is even closer: never more than 150 meters from any beach on the western shore, and as close as 30 meters off Balfour Town, the main population center. In sum, only a tiny fraction of the Turks Bank is afforded any protection by the two islands that comprise more than 90% of the Turks Bank's land mass.

Some sheltered waters lie in the lee of Cotton Cay, Long Cay, Pinzon Cay, Pear Cay, and Big Sand Cay. But these islands, even when considered together, are small when compared to Grand Turk and Salt Cay. Moreover, these islands are not near each other, and lie windward of the big islands. As such, they have nothing to protect them from the prevailing easterlies and the massive waves that these winds produce—the nearest land mass east of these islands is Africa! Although some very nice reefs are found leeward of these islands, especially west of Long Cay, they can be difficult to reach. Since these islands lie in isolation from each other, the waters between them are usually rough, and often dangerously so. This makes getting to these islands difficult—one must brave the swells for a considerable distance before reaching their sheltered leeward waters (Figure 3-2).

A final consideration is the aridity of the Turks Islands. In general, rainfall in the Bahama archipelago is greatest in the northwest and diminishes steadily as one travels southeast. Given the Turks & Caicos' location at the extreme southeastern end of the archipelago, it is perhaps unsurprising that these islands receive, on average, less than a third of the precipitation of Grand Bahama and Abaco (Keegan 1992:29). Dramatic differences in precipitation are also present among the Turks & Caicos themselves; the islands become increasingly arid as one

moves east. This disparity is caused by the nature of rainfall in the Turks & Caicos. Sullivan (1981:8-10) describes it well:

In this area a majority of rainfall comes from convection cells generated by the sun-heated land masses... As the heated column of air rises from the island, it is carried into cooler ambient air with resultant cumulus cloud formation. These columns are often powerful enough to penetrate sufficiently cool levels of the atmosphere that the dew point is reached and cumulonimbus clouds are formed. Were these clouds stationary, then the rainfall would be evenly distributed across the island... The Turks and Caicos are within the northern range of the southeasterly trade winds, however, and the cloud formations normally move southeast to northwest. This is especially true in the summer months when the trade winds and cumulonimbus clouds are at their peak of occurrence. The result is a rainfall cline on the individual islands, increasing to the northwest, which is compounded by chains of islands. East Caicos, Middle Caicos, and North Caicos act as a single island of nearly 40 miles in length in the generation of convective rainfall.

The scenario Sullivan describes explains why Parrot Cay and Pine Cay on the northwest end of the Caicos chain receive around 1,200 mm of rain a year (Sullivan 1981:10), but southeastern islands like Salt Cay and Grand Turk receive only about half of that—575 mm per annum, on average (The Weather Channel 2008). The Turks Bank islands' persistent aridity is one more byproduct of the their location, small size, and non-contiguous spacing. It affects the viability of crops and the availability of fresh water sources on these islands, which would certainly factor into indigenous peoples' settlement strategies.

When the Turks Bank's size, degree of protection, and island configuration are taken into consideration, the total percentage of the Turks Bank that is amenable to human foraging activities is very small indeed. This is not to say that the bank is unproductive; it is merely productive in circumscribed areas and at a far smaller scale than the Caicos Bank. Furthermore, these resources come at a higher cost. It is difficult—and during squally weather, impossible—to move between the productive areas, given where the islands are positioned on the bank and the open water between them. The islands' persistent aridity further complicates the matter, as

rainfall for cultivation and fresh drinking water was less abundant. When viewed in these terms, it is clear that the Turks Bank would have been far less attractive to indigenous settlers than its bigger, calmer, wetter, brother to the west.

### **Biology of the Turks Bank**

The biology of the Turks Bank is generally similar to that of the Caicos Bank. Therefore I will not discuss the particulars of the marine and terrestrial habitats since these were covered in the previous chapter. Also, there is scant cause to discuss the modern Turks Bank fishery. Most of the bank is protected as marine preserves and commercial fishing is banned. Small-scale fishing, conching, and lobstering occurs, but primarily to put dinner on the tables of local households. Therefore, I focus this section on the manner in which the Turks Bank resources were exploited by indigenous peoples over time.

### **Turks Bank Exploitation in Prehistory**

In her excellent dissertation, Betsy Carlson (1999) offers a thorough analysis of the faunal assemblage at the Coralie site (GT-3) on Grand Turk. Coralie is the oldest known site in the southern Bahama archipelago and is thought to represent the first human foray into the area. Because Carlson's analysis begins with the first occupation of the Turks Bank, her work paints a picture of how the local biology appeared in a pristine state. It also demonstrates how that biology changed due to human predation over time. The terminal occupation horizon at Coralie, circa AD 1170 (Carlson 1999:52), coincides with the arrival of Meillacan-affiliated people in the Turks & Caicos, and there are interesting differences between faunal assemblages recovered from the earliest and latest strata.

Faunal data from Coralie is complemented by information from the Governor's Beach site (GT-2), also on Grand Turk. Governor's Beach is a Meillacan site that dates to AD 1100-

1300 (Carlson and Keegan 2004:89). Thus, it shares a culture history and is contemporaneous with the Caicos Bank sites I discuss in subsequent chapters. Combined, these sites offer excellent insight into how the Turks Bank fauna would have appeared in prehistory, and which resources would have been available to them over time. I examine the faunal record at both of these sites below.

### **The Coralie site**

Coralie was occupied for a long time, but the settlement was impermanent. Radiocarbon evidence indicates that it was inhabited sporadically from around AD 700 to AD 1170 (Carlson 1999:52,217). The ceramic assemblage was executed entirely in the Ostionan Ostionoid style and was imported from Hispaniola (Cordell 1998). This fact clearly suggests that the colonists hailed from that island and brought the pots with them on their occasional visits.

Coralie lies on the northern end of Grand Turk, on the western shore of North Creek, a large inland bay, near its mouth to the ocean (Carlson 1999:22). This location “provided easy access to many habitats including mangrove, inland lagoon, tidal flats, rocky shore, sea grass beds, coral reefs, deep water, and inland scrublands, which could all be exploited for their animal inhabitants (Carlson 1999:23). And exploit they did: Carlson identified a remarkable 126 faunal taxa at the site, including 6 reptiles, 21 birds, 35 fish, 4 crustaceans, 43 gastropods, 22 bivalves, 3 echinoderms, and one amphineuran (the West Indian Fuzzy Chiton) (Calrson 1999:63-65).

In total, 94% of the meat consumed at Coralie came from the sea (Carlson and Keegan 2004:90), which is in line with our expectations about the subsistence habits of a marine-oriented people. Yet strangely, this component was not dominated by fish, but by Green sea turtles (*Chelonia mydas*), which accounted for 77% of the total biomass. Terrestrial animals accounted for only 6% of the meat consumed, but they injected a lot of the variety in the diet. They

comprised 49% of the MNI recovered at the site, indicating that the inhabitants invested “considerable effort and time into harvesting terrestrial species such as birds, tortoises, and iguanas” (Carlson and Keegan 2004:90).

When viewed in its entirety, the faunal assemblage of Coralie is atypical of sites in the Turks & Caicos. Three aspects of the Coralie site explain the outlying nature of its deposits.

First is the site’s location. Wing and Scudder (1983) found on the Caicos Bank that people tended to focus on whatever was nearby—in that case, reef resources at MC-12 and tidal flats resources at MC-6. In contrast, Coralie was situated adjacent to virtually every type of animal habitat that exists in the Turks & Caicos Islands. Very likely, the diversity of the deposits reflects the diversity of creatures that were readily available and could be collected with little effort. Thus, the occupants of Coralie did not specialize on a particular basket of resources because they did not need to.

The second factor is the site’s timing. Coralie is thought to reflect the first human presence in the region, and these initial colonists would have arrived to a pristine ecology virtually untouched by human predation. It is a well understood archaeological fact that the first humans to reach an island tend to go after the “low hanging fruit” before shifting their subsistence strategy to items that are more difficult or costly to obtain or have lower nutritional or social value (for a relevant sample of this voluminous literature, see Carlson and Keegan 2004; Keegan et al. 2008; Kirch 2000). Carlson directly observed this phenomenon at Coralie: “the inhabitants ate the largest sea turtles, iguanas, birds, groupers, snappers, and lobsters at the beginning of their occupation on Grand Turk”, but the number of sea turtles and the size of iguanas and fish declined over time as the largest and/or easiest things to catch gradually diminished in numbers.

The third factor is social in nature. Toward the end of the Coralie occupation in the 12<sup>th</sup> century AD, the faunal assemblage had shifted to reflect changes in resource availability, yet still remained distinct from assemblages at the contemporary Governor's Beach site on Grand Turk as well as those in the Caicos Islands. Carlson argued, and I agree, that these differences in subsistence were due to social differences between the peoples who inhabited these sites. The Coralie population used imported Ostionan ceramics, which links them to populations in Puerto Rico and eastern Hispaniola. The other sites were settled by a people with ties to the Meillacan producing populations along the northern coast of Hispaniola. Their sites are different because they were settled by different people with a different heritage, ceramic tradition, subsistence plan, settlement strategy and worldview (*sensu* Carlson 1999:212).

For these three reasons, the Coralie site is not the best proxy to reconstruct the subsistence strategy of subsequent settlements. Still, the faunal record at Coralie is instructive to this analysis because it paints a clear picture of what remained available to later residents of the region.

### **The Governor's Beach site**

The Governor's Beach site lay adjacent to the lee beach on the southwestern side of Grand Turk. This places it approximately 12 km from Coralie, and at the opposite end of the island. Radiocarbon dates indicate that Governor's Beach was occupied from AD 1100 to 1300 (Carlson and Keegan 2004:89), and with the exception of a single Ostionan sherd, the entire ceramic assemblage is Meillacan. Keegan (2007:88) describes it as a seasonally-occupied outpost established by people from Haiti to manufacture beads out of the brilliant red shells of the thorny jewelbox (*Chama sarda*). These beads would have had much value as ritually-imbued exotic items, and their worth would have more than compensated for the time and effort

spent in transit (Keegan 2007:88). Excavations in the early 1990s yielded more than 1,500 complete beads, more than 4,400 bead blanks, and a variety of tools used in the manufacturing process (Keegan 2007:88). Interestingly, it appears that the site was abandoned suddenly, as if the residents were driven off by a hostile force. Almost 400 completed beads were intentionally burned and destroyed, and a number of valuable and status items were abandoned (Keegan 2007:90). Keegan (2007) and Carlson (1993, 1999) have interpreted this as evidence of conflict between the Governor's Beach residents and some other group, possibly their neighbors at Coralie, with whom they shared the island for a period in the 12<sup>th</sup> century. Raiders from contemporaneous settlements in the Caicos Islands could also be responsible.

The faunal assemblage at Governor's Beach is unremarkable when compared to that of Coralie. None of the turtle, iguana, tortoise, large fish, lobster, and birds that were common at Coralie were present at Governor's Beach. Instead, the residents focused on conch, land crabs, and fish. Of the latter, grunts (*Haemulon* sp.) were the clear favorite, accounting for 78% of the entire vertebrate assemblage by MNI (Carlson and Keegan 2004:93). Interestingly, most of the fish remains were "head elements" (Keegan 2007:89), and "only 71 vertebrae were recovered even though all the matrix was fine screened" (Carlson 1999:145). The abundance of grunts led Carlson (1999:146) to infer that the site's inhabitants were laying traps or netting these fish on shallow reefs, which are abundant in that area. Carlson also reasoned that since the Governor's Beach site was only used to make shell beads, these simple methods of food capture "may have been the easiest way to meet basic subsistence needs while performing their primary task there" (1999:146), a hypothesis repeated by Keegan (2007:90). The dominance of head parts in the assemblage also suggests that at least some of the catch was prepared for export back to Haiti (Keegan 2007:171). The catch could have been cured with salt collected from a tidal basin just

inland of the site, or preserved for transport by smoking (Carlson 1993). In any event, the Governor's Beach faunal assemblage does not reflect the full panoply of land and sea animals available on the Turks Bank. Moreover, as a seasonal, special purpose site, it does not reflect the full range of subsistence behavior documented in the archaeological record. Nevertheless, it demonstrates that small groups of people could, at a minimum, sustain themselves on the Turks Bank's available resources, and even have a little surplus left to take home after their stay. This point is significant, as it demonstrates that human settlement in the Turks Islands is possible even though the marine environment is not nearly as productive as that of the Caicos Bank.

#### **Site GT-4**

Shortly before we arrived a new Grand Turk site was brought to the attention of Nigel Sadler, who was then the director of the Turks & Caicos National Museum. On June 7, 2004, Mr. Sadler drove us to the site, which is located adjacent to the beach on the western shore of Grand Turk, approximately 2.5 km north of downtown Cockburn Town. The site, designated GT-4, lies adjacent to a housing development and has been disturbed by construction. The southern portion of the site appears to lie under someone's back yard, and a drainage ditch cuts on an east-west axis through the site's center. Our brief surface reconnaissance did not yield much in the way of diagnostic cultural material, so I was unable to establish so much as a preliminary cultural affiliation. However, a more recent examination of GT-4 suggests that the site is "virtually identical to the Governor's Beach site" (William Keegan, personal communication 2008), which would make GT-4 contemporaneous with several sites I examined in the Caicos Islands. Yet, no excavations have been undertaken at GT-4. Any firm analysis of the site's role in early Lucayan settlement patterns will have to wait until we learn more.

## **Survey Theory and Methodology**

### **Survey Theory**

The survey objectives on the Turks Bank were different from my goals on the Caicos Bank. Essentially, I wanted to compile a complete inventory of the Turks Bank's archaeological resources and present these findings as a cohesive whole. Over the past decades, the Turks Islands have been fairly well explored by amateur and professional archaeologists. Yet the record of what they encountered remains fragmentary because there is no single source or publication that presents it in its entirety. There are a lot of snippets, but these are largely stories and recollections backed up by a few copies of informal field notes and GPS coordinates in the archives of the Turks & Caicos National Museum. These were certainly helpful as I planned my work, but they are less useful if one wants to reconstruct a fuller picture of the region's prehistory. Only two sites have ever been published in the literature, and these are both on Grand Turk. Little work has been done at any of the known sites on other islands, and none of that has been disseminated for widespread consumption. A thorough survey of the Turks Islands, coupled with excavations at other, previously identified yet unexcavated sites, would enable me to create a more complete picture of how the area was exploited in prehistory.

### **Survey Methodology**

It was far easier to formulate a strategy for the Turks Bank than for the Caicos Bank. There are only 10 Turks Islands. The two largest islands, Grand Turk and Salt Cay, have been heavily developed and are fairly well understood archaeologically. Cotton Cay has been surveyed several times, beginning with Bob Gascoine and associates in the early 1980s, Keegan and Carlson in the 1990s, and Brian Riggs at various times over the past three decades. Their collective efforts identified two sites, and our test excavations at one of these are described in

Chapter 6. I had already surveyed Gibbs Cay on a trip in 1999, and easily located the site Brian Riggs told me about at that time. That left only six islands to survey. I would survey all of them to personally verify the stories and memories and informal notes once and for all, and also to see if anything had been missed.

The team and I were scheduled to spend two weeks in the Turks Islands—one week each on Grand Turk and Salt Cay. We planned to stay on Grand Turk first, and my initial objectives for the week were to test excavate the site on Gibbs Cay and survey the adjacent islands Long Cay, Penniston Cay, and Round Cay. The next week I planned to conduct subsurface testing at one of the two known sites on Cotton Cay, test excavate the site on Salt Cay, and survey Pear Cay, Pinzon Cay, and Big Sand Cay. But before we even arrived on Grand Turk, I had to make a few changes.

During our stay on South Caicos I received a call from Mr. Brian Been of the Turks & Caicos Tourist Board, who asked if we could help him with a project. At that time, the Government was in the planning stages to develop and improve the area around South Creek National Park on Grand Turk. Construction on the Cruise Terminal had begun, and Government and the Tourist Board wanted to make the National Park area accessible and accommodating for tourists on shore excursions from the ships. They were particularly interested in promoting to tourists two 18<sup>th</sup> century artillery placements that had been established to defend the southern approach to Grand Turk: one on Gun Hill in the South Creek National Park, and the other just across the water on the highest point of Gibbs Cay. Mr. Been asked if we could examine Gun Hill and the Gibbs placement, complete a brief survey of potential prehistoric activity areas within the park's boundaries, and submit a formal report on the results (Sinelli 2004, see Appendix A). I accepted the opportunity to give back to the community and build goodwill, so I

shuffled the schedule to save a day for the Gun Hill/National Park survey and a day to test excavate the placement on Gibbs Cay.

I was unaware at the time that the entire southeastern shore of Grand Turk had been extensively surveyed in the past. As part of a large survey project in 1990, William Keegan, Maurice Williams, and Grethe Seim dug a series of 34 test units along the coast from Masterson's Point to Gun Hill, and found no evidence of indigenous occupation in the area (Keegan et al.. 1990:9). Had I known, the team and I could have saved half a day of walking through the park. Still, our survey of Gun Hill yielded important measurements and sketches of the ruin, and our excavations at the emplacement on top of Gibbs Cay were the first to scientifically explore and document that cultural resource. In the end, this work had only minimal impact on my initial research objectives. Moreover, the report was very well received and now there are jeep safaris throughout the wilds of the South Creek National Park, with a stop at Gun Hill. It was also a fun occasion to do a little historical archaeology in a place and era that I have always found fascinating. As such, our work with the Tourist Board was a success.

The Turks Bank surveys were executed in much the same manner as the Caicos Bank surveys, with the only exception that I did not split the group into “survey teams” and “excavation teams.” Unless someone was sick, we all went on survey together. Only after we arrived did I split the group into two or three subunits. The reason was simple: the Turks Islands are bigger and more remote, so it takes longer to get there and longer to complete the survey. I needed as many feet on the ground as possible in order to cover the survey area in time to catch the boat for the long, choppy ride back to base.

## **Survey Results**

As mentioned above, I originally planned to survey all six of the unexplored cays on the Turks Bank. However, after seeing Round Cay and Penniston Cay in person, it made no sense to survey there. Round Cay is located 500 meters southeast of Gibbs Cay and 1.9 km east of the southern edge of Grand Turk. It is a 130 x 80 meter, dome-shaped monolith with little soil and a few stalwart shrubs clinging to the rock. Its shores slope precipitously to the sea so there are no beaches to access, and the waters surrounding it are so full of rocks and coral heads that our boat driver was extremely reluctant to try an approach. Penniston Cay is located 5.2 km southeast of Grand Turk and 2.3 km northeast of Cotton Cay. It is 630 meters long and undulates between 30 and 80 meters wide. It is almost entirely devoid of soil or vegetation and has no beaches anywhere along its perimeter. Its rocky shores are sheer mini-cliffs that jut several meters up from the water, so that even landing on the island would be a considerable challenge. I do not believe that we missed anything by bypassing these barren, rocky islands. They are not the sort of environment that indigenous peoples would have chosen for settlement. At most, they might have dropped by on occasion to exploit the local resources, particularly at Penniston Cay, which has a number of reefs off its western shore.

With Round Cay and Penniston Cay out of the picture, the team had to survey only four cays on the Turks Bank. Each island is discussed below in the chronological order in which it was surveyed. In each case I first describe the cay's location and offer a brief physical description. Next I discuss the particulars of the survey: when it occurred and what was discovered or observed. Finally I interpret these results and examine how each cay may have featured in indigenous settlement patterns. A comprehensive summary of what I learned from the surveys follows at the end of the chapter.

## **The Survey of Long Cay**

### **Physical description and survey methodology**

Long Cay is part of the Grand Turks Land & Sea National Park, but enjoys additional protection as the Long Cay Sanctuary for birds and wildlife (Department of Environment and Coastal Resources 2008). Like its twin on the Caicos Bank, Long Cay is long and narrow (Figure 3-3). The island is 1.9 km from tip to tip, between 30 and 140 meters wide, is oriented on a northwest to southeast axis, and covers a total area of 18.58 hectares (Department of Economic Planning and Statistics 2008b). Long Cay has some elevation, with a ridge that rises to perhaps 15 meters above sea level at its apex near the middle of the island. From that point southward the island is generally higher, with the northern half being flatter and of lower elevation. There are a few small beaches scattered along the island's lee shore. In general, the waters to the lee of the island are quite calm when compared to swells on the open bank, sheltered as they are by Long Cay's nearly 2 km length. The windward shore is typical of these islands—scoured rock with no soil or vegetation. On the southern, elevated half of the island the windward shore usually rises in a sheer cliff several meters above the pounding surf. Since the northern half is lower and flatter, there are fewer cliffs and a more gentle, rocky slope to the water. In any event, there is evidence that most of the island is awash in large storms. Flotsam litters the western shore, even in places where the cliffs are 5 or more meters above sea level (Figure 3-4). The debris is deposited by large, powerful waves with enough force to drop an enormous tree trunk on one of the highest parts of Long Cay, near the apex of the central ridge (Figure 3-5). The cumulative effect of these waves also created an interesting feature that we would see on windward shores throughout our Turks Bank surveys. They have constructed a rock "wall" as rocks and boulders have been washed inland (Figure 3-6). It is like the undulating

band of sea foam left on the sand as a wave reaches its maximum surge up the beach and then retreats, albeit on a much grander and more terrific scale. Like all the Turks Islands, Long Cay receives little rainfall and is very dry. Consequently, vegetation on the island is dominated by low grasses, some stunted patches of sea grape, and numerous cactus stands. Few plants exceeded a meter in height. There were no mangroves, even in the sheltered lee where these plants are frequently found, probably because of the island's exposure to wave action.

Mangroves like calm water.

We surveyed Long Cay on June 8, 2004. Brian Riggs (personal communication 2008) told me of a site “somewhere” on Long Cay where, in the early 1990s, he found a “single Palmetto ware sherd in a conch pile” (Keegan et al. 1994:9). He did not have precise directions or coordinates, but we wanted to locate it and evaluate its potential. Beyond that, we intended to conduct a pedestrian survey only, and if we found anything of note, return later in the week to complete some subsurface tests. Consequently we did not bring any excavation or testing equipment. We approached from the west and disembarked on a nice little beach near the south-center of the lee coast, about 475 meters from the southern tip. We were immediately accosted by flocks of Brown Noddies (*Anous stolidus*) (Sibley 2000:239) that enjoy the protection of the Long Cay Sanctuary (Figure 3-7). Evidently we arrived during the peak of nesting season, and the birds were quite distressed with the intrusion. Since they lay their well-camouflaged eggs directly on the ground rather than in a nest (Figure 3-8), we had to be very careful not to step on any. Nevertheless, the ingrate Noddies did not appreciate our thoughtfulness and they harassed us relentlessly until we left the island hours later.

## **Survey results**

**The Somewhere Activity Area.** We found evidence of prehistoric activity on Long Cay within minutes of our arrival. There were several punched conch in a flat, sandy area immediately adjacent to the beach where we landed (Figure 3-3). The flat, sandy area was level and roughly circular, with a diameter of about 20 meters. It lay approximately 2 meters above sea level, in an area that is among the lower parts of the island. Initially I thought we had landed right on Brian Riggs' site "somewhere" on Long Cay, but a thorough surface reconnaissance did not yield any more pottery, other cultural material, soil changes, burnt rock, or other features. The sand was a uniform light color identical to that of the beach. This makes sense given the low elevation of the area and the propensity of large waves to wash over Long Cay. As mentioned above, we were not equipped to do any sub-surface testing, and I was unwilling to return all the way to Long Cay to test what could only have been a very small site in the first place.

Still, "Somewhere" presents a conceptual problem. The available evidence suggests that this area is little more than a simple conch-kill spot. However, given the enormous scouring power of wave action on Long Cay, which is very well evidenced across the island, it is reasonable to hypothesize that there was a site here, but it has been destroyed. There is also a strong theoretical basis supporting a "destroyed site" hypothesis. We landed immediately adjacent to the site because it was the finest beach on the lee side of the island. This is exactly the environment in which one expects to find a site. In fact, our survey revealed that if indigenous people were to settle Long Cay, they could not find a more suitable location anywhere else on the island. Furthermore, placing a site there would make perfect economic sense. It is near the center of the lee shore, making it a central location from which to exploit all

of the marine resources in the protected waters on the island's western side. Small reefs are abundant here, and we observed massive 3-foot-long parrotfish (*Scarus* sp.), possibly Blue Parrotfish (*Scarus coeruleus*) because of their color and size, lolling along within meters of the lee shoreline. Additionally, we encountered hundreds of empty West Indian Topsnail (*Cittarium pica*) shells washed up on the rocky eastern shore, and observed hundreds more live animals attached to the rocks in the water. These gastropods thrive on rocky coastlines like that of Long Cay and would have been an attractive food source. Finally, as we discovered first hand, there is an abundant, seasonally-available terrestrial resource: bird eggs. They are so numerous that you literally have to try not step on them. Moreover, the defensive, dive-bombing behavior of the birds themselves would make them fairly easy to net during their nesting season.

No matter how compelling the theoretical arguments may be, I must reject the destroyed site hypothesis out of pure conservatism. "Somewhere" may indeed be a real site—Brian Riggs' single Palmetto ware sherd suggests as much—but there is not enough tangible data to support that assertion at this time. In keeping with the classification system I outlined in the previous chapter, I classify Somewhere as an activity area, based on the presence of the punched conch.

**Additional features.** The only other evidence of human activity we encountered were two small areas of slightly darker soil scattered with small amounts of fire cracked rock. Neither of these was more than a few meters across, and no other cultural material was observed. I interpret these as the remains of modern fire pits which had been scattered about and washed around by wave action. There is certainly no compelling reason to believe they have any antiquity. Beyond that, no other areas of activity were identified. The truth is, if they were ever there, they probably would have been destroyed by the North Atlantic's fury long ago.

## **The role of Long Cay**

Long Cay is not suitable for permanent occupation. It is too exposed to the sea and much of the island is washed over by wave action. Beyond the danger to life and limb, these storms would have obliterated structures and material goods, which would have been quite a disincentive to establish much of a long-term presence on the island. Still, it is an attractive environment from an economic perspective. At nearly 2 km long, Long Cay creates the third-largest sheltered lee on the Turks Bank. Only Grand Turk and Salt Cay have a larger wind and wave shadow, and their proximity to the edge of the platform considerably truncates the area of bank they protect. Consequently, the waters west of Long Cay must be among the most productive in the region. Moreover, topsail are abundant on the east side, and the seasonal availability of multitudes of easily collected bird eggs are a valuable asset. I find it difficult to imagine that indigenous peoples did not recognize these facts and exploit the area, perhaps setting up small camps like the Somewhere activity area on a seasonal, intermittent basis. However, the lack of any convenient fresh water source would have certainly limited the duration of their stay.

The precise manner in which Long Cay was occupied in prehistory—if it even was—is difficult to prove given the available data. Over the intervening centuries the waves have all but scrubbed the island of any archaeological evidence.

## **The Survey of Big Sand Cay**

### **Physical description and survey methodology**

Big Sand Cay is not part of the Grand Turks Cays Land & Sea National Park, but it is protected as the Big Sand Cay Sanctuary for birds and wildlife (Department of Environment and Coastal Resources 2008). It is the southernmost island in the entire Bahama archipelago, and

lies 11.2 km south-southwest of the southern tip of Salt Cay, or 14.5 km from the Salt Cay harbor at Balfour Town. Big Sand Cay is approximately 2.5 km long and between 200 and 400 meters wide, for a total land area of 57.95 hectares (Department of Economic Planning and Statistics 2008b). The island is elevated to about 20 meters at its northern and southern ends. In the middle the landscape is flatter and lower. A steep, rocky cay just east of the northern half of the island is attached to the main land mass by a narrow isthmus, creating a sheltered, shallow lagoon (Figure 3-9). This islet protects the northern half of Big Sand Cay from wave action, so the windward shore there was a gently sloping beach to the lagoon and not the bare, scoured rock we encountered on all the other cays' eastern sides. The southern half of the island has no protection, however, and was typical of the windward coasts of the others. We did not observe any signs of wave action in the island's interior as we noted on Long Cay. The island is elevated, but the lack of overwashing may also be due to the local morphology of the bank. The water east of Big Sand Cay is shallower than the water east of the islands to the north, so the bottom would break the swells and diminish their energy before they hit the island. Along the western shore in the center of the island lay one of the most beautiful beaches in the Turks and Caicos Islands, or anywhere else in my opinion (Figure 3-10). This area is a favorite anchorage for touring sailboats, and hosts more than a few day-tripping tourists from Salt Cay. However, there is absolutely no infrastructure to support their visits.

By virtue of the island's position at the extreme end of the archipelago and its isolation from other islands, Big Sand Cay is extremely dry. The vegetation reflects the lack of rainfall. The ground is covered by the same xeric, salt-resistant plants that inhabit the salinas on the big Caicos islands, and there are a great many stands of cactus. There are no trees, or any shrub higher than eye level (Figure 3-11). Still, Big Sand Cay is full of animal life. Rock iguanas

thrive on the plentiful cactus under the protection of the Big Sand Cay sanctuary. Small lizards are common, and as on Long Cay, birds are everywhere.

We surveyed Big Sand Cay on June 14, 2004. Big Sand Cay is the most remote island we surveyed and the waters between it and Salt Cay are unsheltered and rough. It was a rolling and occasionally queasy 90 minute ride to the island. We disembarked near the northern end of the lee beach. From there the entire team moved north to Big Sand Cay's northern tip, then turned back to head south. At that point I divided the team into two subgroups and we advanced along the eastern and western shores. Given the lack of any sizeable vegetation, the teams were always within sight of each other.

We found that Big Sand Cay was filled to Hitchcockian proportions with Sooty Terns (*Sterna fuscata*). This bird nests on the ground and “virtually never perches” (Sibley 2000:238), so Big Sand Cay’s low vegetation and open landscape makes an ideal rookery. It seemed that every Sooty Tern in the West Indies was on Big Sand Cay tending a nest on the day we surveyed (Figure 3-12). The terns were no happier to see us than the Brown Noddies were the week before, but this time we came prepared. We observed that the Brown Noddies liked to swoop down at our heads before turning away at the last instant. Toward the end of our visit to Long Cay, we realized that if we held a long stick up straight in the air, it confused the birds and they would go after the top of it instead of the top of us. So, we all found a long piece of driftwood or bamboo on Salt Cay and brought them along to Big Sand Cay. We spent the entire survey marching around like a medieval European infantry unit with pikes at the ready (Figure 3-13). I am sure we looked funny to our boat driver, but it worked, and you cannot argue with results.

## **Survey results**

**Prehistoric activity.** The ten of us surveyed Big Sand Cay for the better part of a day and did not observe so much as a single punched conch shell. I paid particular attention to the beach surrounding the lagoon that lay protected by the small windward islet. Theory suggests this arrangement would be a fine place to establish a site, yet nothing was observed. There is no evidence that indigenous peoples ever occupied the island.

**Modern activity.** There is ample evidence of modern activity on the northern end of Big Sand Cay, where the island is widest and highest. A small, 4x4-meter abandoned concrete building sits adjacent to the crumpled remains of a large radio antenna and a modern, functioning navigational beacon (Figure 3-14). Only the base of the antenna remains, and I assume that the rest of its metal structure was salvaged for scrap. A derelict truck, probably used to move people and materials around when the radio antenna was operational, sat rusting nearby. Given Big Sand Cay's isolated location, the navigational beacon made sense. It is there to warn sailors about the island and its shoals. But the antenna and concrete building seemed out of place—what could anyone possibly want to transmit out there in the middle of nowhere? Since it made no difference to the day's mission I did not think much about it at the time. That changed the next day when we encountered an even odder assortment of materials on Pinzon Cay (described below), and prompted me to file a Freedom of Information Act request with the United States Department of Defense as soon as I returned home.

My request wound its way through the Department of Defense and several Navy commands. Eventually, in September 2004 I received a substantial package from the Naval Facilities Engineering Command in Norfolk, Virginia. The package included dozens of documents with all kinds of interesting and useful facts and tidbits about the United States'

decades-long military presence in the Turks & Caicos Islands. I mention this here because I was very impressed with how my Freedom of Information Act request was handled, and I want to encourage my colleagues to take advantage of this useful and surprisingly efficient government service in their own research.

It is well known that the United States military maintained a substantial presence in the Turks & Caicos from the early 1950s until the early 1980s. North Caicos had a submarine communications cable facility (Department of State 1972). South Caicos had a Coast Guard station (Department of State 1979), and an oceanographic research facility (Department of State 1956). However, the largest military presence was on Grand Turk. On the south end of the island the Navy established the U.S. Naval Facility on Grand Turk and the Air Force operated the Grand Turk Auxiliary Air Force Base. There were also a radar station, a telemetry station, and a missile destruct station at the north end of the island near the lighthouse (Facilities Engineering Department 1969). These were part of the Air Force's Bahamas Long Range Proving Ground which was established in 1952 "for testing the flight of guided missiles and associated equipment and for training with such missiles and equipment" (Department of State 1952). All of this infrastructure was pivotal to the United States' regional Cold War strategy against the Soviet Union, and later, Cuba. It was also instrumental to our manned space program as a downrange tracking station for every mission from Alan Shepherd's first Mercury flight through the Apollo program (Facilities Engineering Department 1969). Interestingly, John Glenn factors into Turks & Caicos lore: Grand Turk was his first landfall after he completed the first American orbital mission in 1962 (Turks and Caicos National Museum 2008). His fellow Mercury astronaut Scott Carpenter landed there the next year as well.

Although one would not immediately associate the Turks & Caicos with the Space Race and Cold War intrigue, this military infrastructure played an important role in that era's geopolitics, and left a substantial and lasting footprint on the islands as a result. The United States military turned over the naval bases and the air field to the British Government on March 31, 1980. Today the U.S. Naval Facility on Grand Turk houses most of the Turks & Caicos Government's ministerial offices, and the Grand Turk Auxiliary Air Force Base, after a makeover, functions as Grand Turk International Airport. Smaller Turks Islands were impacted as well. According to the cover letter I received in the package from Ms. Sandy Frantz of the Naval Facilities Engineering Command, "The Navy used Grand Turk and the Caicos Islands for telecommunications operations" and that there were "trigonometrical stations located on some of the adjacent cays" (Frantz, personal communication 2004, Appendix A). Big Sand Cay's position at the extreme end of the Bahamas archipelago means it is the southernmost place one can erect a "trigonometrical station"—an apparatus that sends and receives radio signals for communication and to triangulate position via LORAN in an era before satellite platform GPS. Thus it seems likely that Big Sand Cay's antenna complex was a U.S. military installation established to promote navigation and communication with commercial and military shipping.

I recognize that modern activity has little to do with the indigenous settlement patterns. Still, my objective was to identify all of the archaeological resources on the Turks Bank, and historic ruins fall under that umbrella. It is unlikely that anyone will scientifically re-survey these islands, so I have a responsibility to colleagues from all disciplines to report everything since it might be relevant to someone else's research. Moreover, I will disseminate this dissertation to various constituencies in the Turks & Caicos Islands, including the Department of

Environmental and Coastal Resources and the Turks & Caicos National Museum. They are concerned with many matters beyond archaeology, and might find this additional content useful.

### **The role of Big Sand Cay**

Big Sand Cay is probably too remote to have played much of a role in the prehistoric settlement patterns of the Turks & Caicos Islands. Any attempt at settlement would also have been confounded by the island's extreme aridity. Still, it seems unlikely that indigenous peoples would have eschewed Big Sand Cay entirely. Its position at the extreme southern end of the Bahama archipelago means it is the first land mass one would encounter on a northward voyage to the Turks Islands from Hispaniola. As such, it could have provided mariners a break from paddling and a welcome chance to stretch one's legs after a few days cooped up in a canoe on the open North Atlantic, particularly if the voyage was a rough one. Moreover, the seasonally available bird resources would have been attractive. Yet given Big Sand Cay's remote location and the comparative abundance of resources on the Turks Bank, it is difficult to envision people from the islands to the north regularly voyaging there to collect a few bird eggs. Very likely, Big Sand Cay was as ignored in prehistory as it is today.

### **The Survey of Pinzon Cay**

#### **Physical description and survey methodology**

Pinzon Cay used to be known as East Cay, and still is on some nautical charts of the area. In the 1980s the Turks & Caicos Government officially changed the island's name to honor Martin Alonzo Pinzon, owner and Captain of the *Pinta*. The change occurred in advance of celebrations to honor the 1992 quincentennial of Columbus' first landing in the Americas. Grand Turk has always argued that this historic event occurred on its shores, and a monument in front of the post office in Cockburn Town commemorates the occasion.

Pinzon Cay is the most easterly island on the Turks Bank and, by extension, represents the eastern limit of the Bahama archipelago. The nearest eastward land is some 6,800 km away, near the city of Nouadhibou, Mauritania. Grand Turk is closer, and lay 8.8 km to the northwest. The nearest island is Pear Cay, 1.2 km to the north. Pinzon Cay is 1.4 km long and shaped somewhat like an ice cream cone (Figure 3-15). It is widest in the north at 700 meters, and tapers as one moves south, to only 150 meters. It encompasses a total land area of 45.78 hectares (Department of Economic Planning and Statistics 2008b).

The windward side of Pinzon Cay is the same barren, scoured rock we regularly encountered on these islands. The windward shore is somewhat less elevated than on other islands, which affords the interior less protection from surging waves—they can wash right up instead of pounding into the cliffs first. Consequently, we encountered tidal walling similar to that of Long Cay but at a far greater scale. Whereas the rocks that formed the Long Cay wall were usually about the size of a microwave, the rocks washed inland on Pinzon Cay were as big as washing machines and occasionally as large as cars (Figure 3-16). This wall was larger, longer, wider, and higher than any other we encountered on the Turks Bank, suggesting that Pinzon Cay is relentlessly hammered in rough weather.

The northern third of the island is flat and sandy and relatively featureless, but a substantial ridge approximately 20 meters in elevation bisects the southern two-thirds along a northeast-to-southwest trajectory (Figure 3-17). This ridge creates a wind and wave shadow on Pinzon Cay's northwestern side. It seems that the ridge is substantial enough to protect this part of the island since it is free of the storm-washed flotsam that adorns the windward shore and runs well up the windward side of the ridge. This protection has permitted an expansive beach to

form in the ridge's lee (Figure 3-18). There is also a series of dunes immediately adjacent to the beach, some of which rise several meters above the waterline.

Pinzon Cay is part of the Grand Turks Cays Land & Sea National Park, but enjoys no other special designation. The island is extremely arid and windblown, and rarely does one encounter any plant higher than one's knees. The vegetation is similar to that of Big Sand Cay, and is dominated by scrubby shrubs, stunted grasses, salt-resistant succulents, and cactus. Notably, the Turks Head cactus is found on the island in great abundance. This plant is a revered national symbol of the Turks & Caicos and the namesake of the Turks Islands themselves (the first Europeans thought the red bulb on top of the cactus resembled a Turkish fez, and the name stuck). Pinzon Cay is the only island upon which we encountered this cactus, which seems to have adapted to the windy conditions by consistently growing at an angle away from the wind, toward the lee of the island (Figure 3-19). Animal life is scarce. We encountered a few small lizards, but no iguanas or other permanent terrestrial life. There were some Laughing Gulls (*Larus atricilla*) nesting on the island at the time, and they had the same cantankerous disposition as the Brown Noddies and the Sooty Terns. Thankfully, there were not nearly as many of them and they were fairly easy to avoid. In contrast, the marine resources around Pinzon Cay are abundant and would have been attractive to prehistoric peoples. The island is quite large and creates a sizeable lee that harbors numerous reefs. The lee shore of the island south of the beach is also quite rocky, and we observed many West Indian topsnails and more than a few big Blue Parrotfish in this area.

We surveyed Pinzon Cay on June 15, 2004. It was a relatively calm day, but Pinzon Cay is about 16 km by boat from where we were staying and it took more than hour to reach the island. The nice beach on the island's northwestern shore made it easy to approach and

disembark. The entire field school participated in the survey, and upon arrival I divided us into three survey teams. We proceeded south, went up and over the ridge, and surveyed the southern part of the island before turning around and moving up the windward shore to the northern side. As on Big Sand Cay, it was easy to stay in visual contact given the island's lack of high vegetation.

## **Survey results**

**PC-AA01.** This activity area is situated northeast of our landing point on the northern shore of the island. We identified two punched conch in a flat, sandy area about 30 meters inland from the beach and immediately behind the dunes. A thorough surface reconnaissance of the area did not yield any additional evidence in the immediate vicinity. There were no changes in vegetation or soil appearance, and no other cultural items or fire-cracked rock was observed. If there was additional evidence, it could have been deeply buried by the wind-blown sand, and may have even been under the surrounding 4 meter high dunes.

Approximately 80 meters east of PC-AA01, we observed what could have been a ground limestone pestle on the surface about 30 meters from the beach (Figure 3-20). This item was approximately 25 centimeters long with a uniformly smooth surface, and had a pronounced flattened bottom as if it was worn down from use as a grinding or crushing implement. Still, it could be natural. We encountered many smooth, wave-tossed limestone rocks along the windward shore, frequently aggregated in large deposits behind a protective rock outcropping or boulder (Figure 3-21). This item was situated far away from that environment and well within the protection of the ridge, on a flat sandy terrain well back from the sandy beach and its calm waters. The fact that it was near an activity area and so far removed from the context in which it

would occur naturally suggests some human agency at work. Yet it is difficult to say with absolute certainty that indigenous people either made or used this item.

**Historic activity.** Pinzon Cay was occupied historically, but under mysterious circumstances. As we moved south from the landing area, my subgroup was surveying the leeward shore. As we crested the ridge we stumbled onto what appeared to be the ruins of some kind of U.S. military outpost. It was situated near the top of the ridge, but slightly on the windward side to provide an unobscured view of the waters to the east and south. There was a variety of interesting features that looked like structure foundations. A rectangular, stacked rock feature at the top of the ridge was the only fully-enclosed foundation (Figure 3-22). Since it was also downwind from the rest of the camp, it may have been a latrine. Approximately about 20 meters southwest, slightly down the ridge, there were 16 stacked stone footers arranged in 2 parallel rows of 8. There was a 3 meter space between each footer and a 5 meter space between the rows. Most were mortared to ensure stability, suggesting that they supported a large, possibly wood or wood-framed structure (Figure 3-23). Yet there were no boards or lumber scraps. These would have survived in the arid environment of Pinzon Cay, so either they were removed from the island or the structures were of an impermanent nature, like tents. To the south of the footers, a little more down the ridge, were a series of long, low rock walls arranged in odd triangular and rectangular shapes (Figure 3-24). There were also the rusting remains of abandoned equipment (Figure 3-25) and three large, black, apparently inflatable bladders (Figure 3-26) that looked like giant neoprene balloons. We even found a license plate that said “U.S. Government” (Figure 3-27)—an illuminating discovery that led me to file the Freedom of Information Act request with the Department of Defense.

When I got home I filed the FOIA request online and included photos of the site and the license plate. One of the places it landed was the desk of Dr. John R. Schindler, Command Historian for the Naval Security Group Command at Fort Meade, Maryland. In his reply letter (Appendix B) Dr. Schindler reported that he could find no information about the outpost from the Naval Security Group or the Office of Naval Intelligence. But he added “What you encountered sounds like a onetime U.S. Government—and probably U.S. Navy—activity, but I can find no records of it” (John Schindler, personal communication 2004). I find this interesting, because Pinzon Cay is never mentioned in the comprehensive ream of documents the other Navy departments sent me, either. It is almost as if the infrastructure there never existed, at least from the government’s “official” point of view. Conspiracy theories aside, it would be interesting to know what our military was up to in such a remote and desolate place. I surmise that Pinzon Cay’s position at the end of the Bahama archipelago—and its proximity to the shipping lanes between Cuba and the North Atlantic—may have had something to do with it.

### **The role of Pinzon Cay**

Of all the small cays on the Turks Bank, Pinzon Cay is most amenable to indigenous settlement. The long, sheltered beach on the island’s northwest side is, theoretically speaking, exactly the type of environment the Lucayans preferred to settle. However, the evidence suggests that any occupation of Pinzon Cay was fleeting and transitory. This is likely due to the island’s aridity and its relative isolation from larger islands that would have been more likely to harbor sources of fresh water, even if only seasonally.

As with the other small cays on the eastern Turks Bank, marine resources would have been the primary draw. I find it quite likely that Pinzon Cay would have been visited on occasion by small groups of indigenous peoples intending to exploit the island’s rocky coastline

and adjacent reefs. Unfortunately, there is no ceramic evidence to determine who these prehistoric peoples were, or when they might have visited.

## **The Survey of Pear Cay**

### **Physical description and survey methodology**

Pear Cay lay 1.4 km north of Pinzon Cay and 7.5 km southeast of Grand Turk. The island is shaped like a crescent with the concave side facing east (Figure 3-28). It is approximately 550 meters long and ranges in width from 75 meters in the north to 250 meters in the south. It covers an area of 11.27 hectares (Department of Economic Planning and Statistics 2008b). Like Pinzon Cay, Pear Cay is elevated. It is low and flat in the north, but one walks steadily uphill as one moves south. The southeastern portion of the island reaches perhaps 25 meters elevation before tumbling off steeply into the ocean. As expected, the island's windward shore is barren exposed rock, utterly devoid of life.

Pear Cay has no beaches whatsoever. The island is extremely dry and its vegetation is even sparser than that of Pinzon Cay (Figure 3-29). We did not encounter any terrestrial animals, and even the birds seemed to stay away. In light of our experiences on the other islands, I found that remarkable. It is possible that some feral animals that escaped our notice live on the island, or had sometime in the recent past. The marine environment also seems less productive, as we did not encounter the topsnails and parrotfish we had frequently seen elsewhere. There are a number of patchy reefs in the island's limited lee, however.

We surveyed Pear Cay immediately after we left Pinzon Cay on June 15, 2004. Since there are no beaches on Pear Cay, getting onto the island was difficult. The shore of Pear Cay is steep and rocky, like a 2 meter cliff in most places. Moreover, seas had picked up since we arrived at Pinzon Cay that morning, and our boat driver could not approach too close to the rocks

for fear of smashing the hull. He found a somewhat sheltered cove and got as close as he could, but I still had to jump off the bow into the water and climb up the slimy rocks. Once I got up they threw me a rope and I alternated pulling the boat to me and pushing it away from the rocks with my legs as the ocean swells rolled by. Only three others got off to complete the survey with me—we felt it was too dangerous to get everyone off and then back on. There were not a lot of complaints from those who remained on board, about being left behind. They dropped anchor and had lunch. The four of us who landed split into pairs and divided the island. I went along the leeward coast while the other group examined the windward. We reunited at the south end of the island and walked 4 wide at 10 to 20-meter intervals through the interior as we returned northward to the boat.

### **Survey results**

There is no evidence that Pear Cay was ever occupied in either prehistory or modern times. We did not encounter any evidence of human activity other than the standard debris washed up on the windward shore. Very likely this is due to Pear Cay's imposing coastline—there is simply no easy way to get onto the island. In the unlikely event that people ever did visit there, the island's lack of resources and parched aridity would have made any substantial settlement impossible.

### **The role of Pear Cay**

It is unlikely that Pear Cay played any significant role in the settlement strategies of indigenous peoples, or anyone else for that matter. It is probable that the leeward reefs were occasionally exploited, but given the island's inaccessibility, it is doubtful that humans would have chosen to land at Pear Cay unless there was some kind of sudden squall or other

emergency. There are far better places to go on the Turks Bank. One need not rely on Pear Cay for much of anything.

### **Conclusion**

The survey indicates that the small, uninhabited cays we surveyed did not play a major role in prehistoric settlement patterns. There is no evidence that indigenous peoples intensively occupied any of these islands, although they may have visited occasionally to exploit the local marine resources and seasonal bird populations. The islands' aridity and remote locations are the most likely reasons for the apparent lack of interest.

The survey of the Turks Bank did not yield any remarkable discoveries, but that was never the primary objective. My goal was to verify the archaeological information that has swirled around since the 1970s and determine if any previously unknown cultural resources were present. In this regard the survey was a complete success. The data I obtained first-hand did, in most cases, corroborate archaeologists' informal thoughts about the Turks Bank. These results complement the literature from the Grand Turk sites and the results of my excavations detailed in Chapter 4 to create a more comprehensive understanding of indigenous peoples' activities in this area.

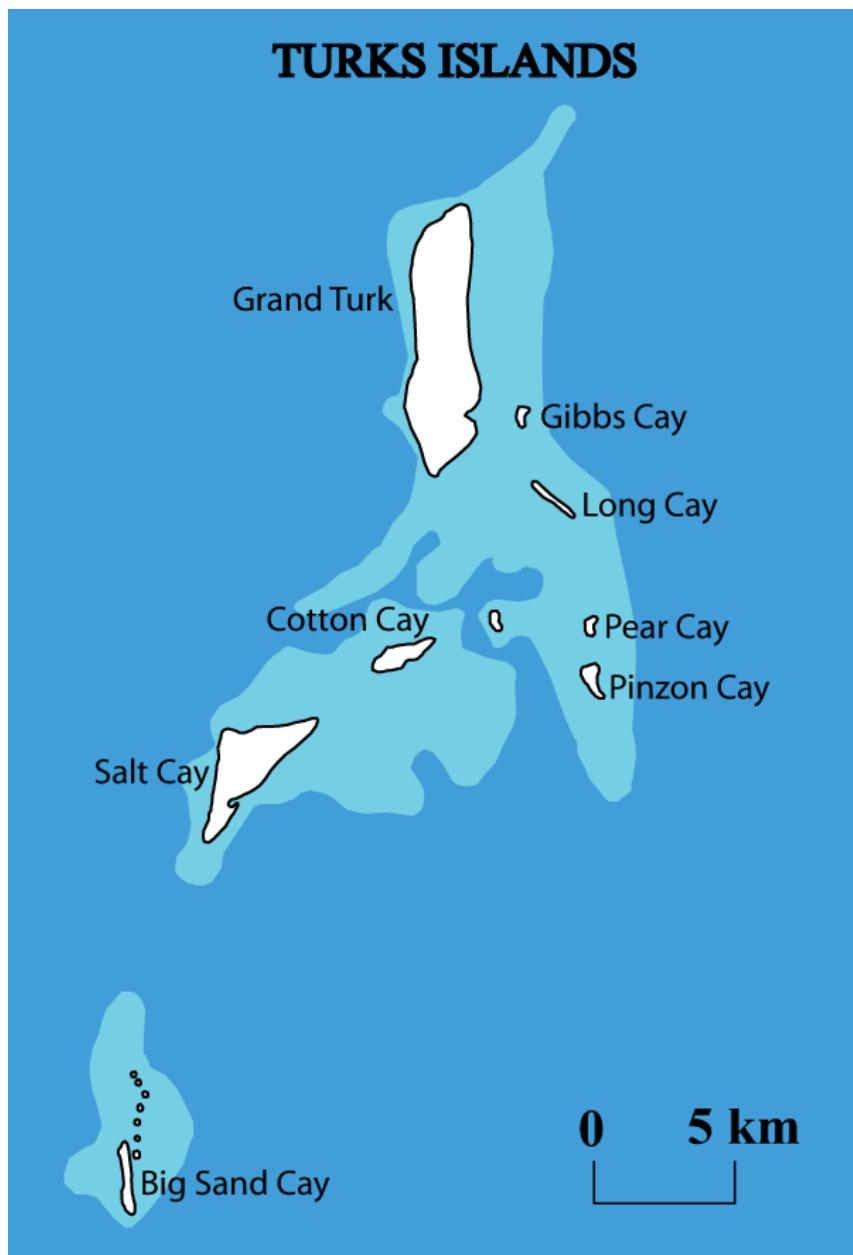


Figure 3-1. Map of the Turks Bank.



Figure 3-2. A typical windy and rough day on the Turks Bank, viewed from Gibbs Cay. Round Cay is in the background with Long Cay behind it on the horizon.



Figure 3-3. Satellite image of Long Cay and the location of the Somewhere activity area. Image created in Google Earth.



Figure 3-4. Pete Sinelli with part of an airplane wing. Interesting flotsam litters Long Cay.



Figure 3-5. The field school students posing on a large tree, washed nearly to the apex of the central ridge of Long Cay.



Figure 3-6. The natural rock wall on the top of the ridge of Long Cay, presumably driven there by the collective power of large waves.



Figure 3-7. Two Brown Noddies taking a break from harassing the anthropologists.



Figure 3-8. A Brown Noddy “nest”.



Figure 3-9. The small island and protected shallow lagoon off the northeastern shore of Big Sand Cay.



Figure 3-10. The beautiful, expansive beach of the lee shore of Big Sand Cay.



Figure 3-11. South-facing view of Big Sand Cay from the northern end of the island, depicting sparse vegetation and the leeward beach.



Figure 3-12. Big Sand Cay's legions of swarming Sooty Terns.



Figure 3-13. Surveying Big Sand Cay with our “bird sticks” at the ready.



Figure 3-14. The foundation and base of the ruined radio antenna on the northern crest of Big Sand Cay. The solar-powered navigational beacon is in the left foreground.



Figure 3-15. Satellite image of Pinzon Cay with location of PC-AA01. Image created in Google Earth.



Figure 3-16. The rock wall of Pinzon Cay's windward shore. The posing student gives a sense of scale.



Figure 3-17. Pinzon Cay's protective ridge, viewed from the northern portion of Pinzon Cay.



Figure 3-18. The protected north and beach of Pinzon Cay as viewed from apex of the ridge.



Figure 3-19. Some of the many Turks Head cacti of Pinzon Cay, listing away from the wind.



Figure 3-20. Possible ground limestone pestle.



Figure 3-21. Assorted smooth rocks collecting behind a boulder on the southern, windward shore of Pinzon Cay.



Figure 3-22. The enclosed limestone rock foundation near the top of the ridge.



Figure 3-23. The stacked and mortared rock footers.



Figure 3-24. South-facing view of the rock wall enclosures descending down the ridge. Three of the mortared footers appear in the foreground.



Figure 3-25. The rusting remains of abandoned equipment. The long object in the right foreground looked like an engine manifold and may have been part of a generator.



Figure 3-26. Three of the four deflated bladders. Their purpose remains a mystery.



Figure 3-27. The "U.S Government" license plate from Pinzon Cay.



Figure 3-28. Satellite image of Pear Cay. Image created in Google Earth.



Figure 3-29. North-facing view of Pear Cay's landscape as seen from the southern ridge.

## CHAPTER 4

### OUTPOSTS: THE TURKS BANK EXCAVATIONS

This chapter describes the excavations of Gibbs and Cotton cays. There is a “Data” and “Results” section for each site. The Data section includes a physical description of the cay and the site. This includes the basic details of the excavation: when it was conducted, how many units were excavated, how the site is laid out, and so forth. The Results section begins with a full accounting of each site’s material assemblage and concludes with specific interpretations based on my analysis of the excavated materials and the local context in which they were recovered. I conclude the chapter by discussing how the sites integrate into the overall archaeology of the Turks Islands. These interpretations are amalgamated into a broader discussion of the early Lucayans’ activity in the Turks & Caicos Islands in Chapter 7.

#### **Gibbs Cay**

##### **Data**

###### **Physical description of Gibbs Cay**

Gibbs Cay is situated 1.5 km due east of the mouth of South Creek on Grand Turk. It is the northernmost remnant of the uplifted relic reef system that lines the eastern boundary of the Turks Bank, which includes, as one moves southward, Penniston Cay, Long Cay, Pear Cay, and Pinzon Cay. Gibbs Cay is shaped like a long, rough rectangle, with its long axis oriented on a fairly close north-south bearing (Figure 4-1). The island is approximately 540 meters long and a mostly consistent 90-100 meters wide, with a total area of 5.87 hectares (Department of Economic Planning and Statistics 2008b). A gorgeous white-sand beach juts out of the island’s southwestern side like a giant triangular tooth (Figure 4-2). The island is technically protected as part of the Grand Turks Cays Land & Sea National Park, but as mentioned in Chapter 3, tourists are still permitted to visit. Although most tourist activity focuses on the beach where the

stingray encounters occur, visitors are free to roam the island. All of this activity probably has had some impact on the island's fauna. We did not encounter any terrestrial species, save a few small lizards, and the nesting birds that plagued us on other cays in the area were not in evidence. Vegetation is sparse compared to Grand Turk, but an attractive carpet of sea oats covers the island. Cactus is also common, particularly at higher elevations where runoff and evaporation rates are greatest. Overall, Gibbs Cay offers a more pleasant and bucolic scene than the scoured moonscapes of islands like Pear Cay.

Gibbs Cay is unique among the small Turks Islands we visited in that most of it is quite elevated. The south end of the island is the flattest, but still sits 6-10 meters above the high water mark. As one moves north, the landscape rises rapidly to an elevation of as much as 50 meters. The island is highest in the center, but maintains significant elevation all the way to its northern tip (Figure 4-3). This topography has two notable effects. First, the lee shore of the island is protected like no other Turks Bank cay we visited. This fact enabled the beach area to weather storms and protected the site and its materials from the overwashing that likely destroyed some of the other cays' evidence of indigenous occupation. Second, the island's bulk protects the lee water, so that the seas between Gibbs Cay and Grand Turk are among the calmest in the area. This protection allows massive mangrove forests to flourish in and around Grand Turk's South Creek, which lay directly west of Gibbs in its wind and wave shadow (Figure 4-4). The protected beach and calm waters, combined with Gibbs Cay's convenient location only 1.5 km from Grand Turk, made it far more amenable to indigenous settlement than the more remote cays to its south. Interestingly, Gibbs Cay's high interior also attracted attention in historic times. The French military established a gun emplacement at the island's apex during their brief occupation of Grand Turk in the early 1780s. The emplacement, known on period maps as "Fort

Castries,” may have helped repel a British naval assault to retake the island and dealt a young Horatio Nelson one of the few defeats of his illustrious career (Sinelli 2004).

### Description of the Gibbs Cay site

The site is immediately adjacent to the beach, on the island proper near the center of the base of the “tooth” (Figure 4-5). The beach itself is very flat and averages about 50 cm above the high water mark. The island proper slopes precipitously upward from the flat beach, rising to an elevation of 3.5 meters over a linear distance of only 10 meters (Figure 4-6). From that point, the interior of this part of Gibbs Cay rises more gradually to a maximum elevation of about 6 meters at its center, which is about 40 meters inland from the beach. Moving east from there, the island is relatively flat until one reaches the windward shore, where it again drops off dramatically to the sterile beach rock of the windward shore. Just north of the site the island rises to its maximum elevation. The top of Gibbs Cay offers a commanding view of the surrounding bank, which is obviously why the French made the considerable effort to place cannons there.

Part of the deposit is eroding out of the site towards the beach in the steep area where the island rises rapidly to an elevation of 3.5 meters (Figure 4-7). The rest of the deposit seems to be intact, with the soils kept in place by a dense cover of hardy sea oats. Yet given that the site is immediately adjacent to the beach where tourists congregate daily, it is certainly exposed to foot traffic if not outright scavenging. The site is no secret—the tour operators tell people it is there as part of their introduction to the island (Mitch Rollings, personal communication 2004). Thus it is quite likely that artifacts have been removed over the years by curious collectors. This fact must be factored into any analysis of the site.

## **Excavation details**

We began our work at Gibbs Cay by conducting a thorough surface reconnaissance of the site and surrounding areas. Most of the other sites we encountered in the Turks & Caicos had an abundant surface scatter of ceramics, shells, shell tools, fire-cracked rock, and other hallmarks of occupation. Except for the fire-cracked rock, these materials were noticeably absent at Gibbs Cay. The only cultural material we saw on the surface was that which had eroded out of the deposit in the sloping area immediately adjacent to the beach. Interestingly, we detected no ceramics in this area, but did encounter broken shell, some broken expedient shell tools, fire-cracked rock, and subtly darker soils. Again, it is probable that tourists picked the surface clean of any “interesting” things like ceramics, tools, and intact punched conch. Fortunately, we did not observe any looter holes or other evidence of concerted, nefarious efforts to raid the site.

Given the dearth of surface material it was difficult to quickly gauge the site’s precise dimensions. However, the site’s position in a sheltered area of the island meant that wind-blown sand was not much of an issue, and it was possible to identify its perimeter by examining changes in soil structure and color. We began at the eroding deposit and fanned out across the gentle upward slope. When we observed a change in soil structure we stopped and marked the location of the change with a washed up plastic bottle (which were in great supply on the windward shore, as usual). In short order we had identified the site boundaries, and determined that it was roughly rectangular, with a 35 meter north-south axis and a 20 meter east-west axis. A further 10 meters of width was present along the site’s southwestern side, but that is the part that is eroding down the slope, and is not habitation area *per se*.

Due to our unanticipated opportunity to assist with the Tourist Board project, we were not able to excavate Gibbs Cay as intensively as I had planned. I initially intended to dedicate

four days to excavations, but the South Creek National Park survey took an entire day, and the Gibbs Cay historic-era gun emplacement excavations diverted half the team for another full day. Consequently, we excavated the Gibbs Cay site on only three calendar days between June 5 and June 9, 2004. The entire team spent two full days working the site and half the team spent another day, for a total of 28 person-days of excavation time.

Five one-meter-square units, designated "A" through "E", and four 50 x 50-centimeter test units, designated 1 through 4, were completed (Figure 4-8). Units A and B were opened first. Both units were arbitrarily situated in areas with denser than average surface scatter. Unit A was located several meters back from the steep slope by the beach, and near the site's southern perimeter. Unit B was situated directly at the top of the steep slope immediately adjacent to a scatter of material that had eroded out of the deposit and down the hill. Unit A was productive, so I opened Unit C directly east of it to essentially create a 1x2. Unit D was then located one meter due north of Unit C. Together, these three units provided a good sample of activities at the southern end of the Gibbs Cay site. To sample the northern end, we laid a transect on a magnetic north-south axis directly from the southwest corner of Unit A to the northern boundary of the site. The four 50 x 50 units began 10 meters north of the southwest corner of Unit A and were spaced every three meters. Based on the data extracted from these test units, Unit E was opened between Test Units 1 and 2.

All units were excavated by trowel and brush to either bedrock or sterile soil. All matrix was screened through  $\frac{1}{4}$  inch hardware cloth mesh. The excavations yielded a total of 29 field specimen (FS) proveniences. Each FS provenience for Units A through E corresponds to a 10 centimeter stratigraphic level. This practice is common in the Turks & Caicos given the generally shallow nature of the deposits and the frequent lack of natural stratigraphy. All units A

through E yielded 5 FS proveniences apiece, which translates to an average depth of deposit between 40 and 50 centimeters. The four 50 x 50 test units were each given a single FS provenience.

Because the entire Gibbs Cay site slopes toward the beach, none of the excavation units was on “flat” ground. Consequently, some of the material recovered in lower levels was actually at or very near the surface. This required me to carefully monitor each provenience to maintain stratigraphic integrity. The exact location of items recovered, vis-à-vis the surface, will be described below as necessary.

## Results

### The ceramic assemblage

**Overview.** As mentioned above, tourists have likely impacted the site’s assemblage, and the absence of any ceramics visible on the surface would seem to support this hypothesis. Yet even underground, the Gibbs Cay site is not rich in pottery. We screened nearly 3 cubic meters of matrix from the site and recovered only 18 sherds weighing a combined 148 grams (Table 4-1). Imported ceramics dominated the assemblage both in number (Figure 4-9) and by weight (Figure 4-10). Sixteen of the 18 sherds (88.9%), accounting for 95.3% of the total weight of the site’s ceramic assemblage, were from imported vessels. Of these, 14 were undecorated body sherds and two were undecorated rim sherds. Two Palmetto ware sherds weighing a combined 7 grams were also identified.

For Gibbs Cay, the analysis of the vertical and horizontal distributions of the ceramic assemblage is limited to sherd count only and is not broken down by weight. Because the sample size is too small, and is biased by a large sherd that alone accounts for 51 of the 148 grams of ceramics, an analysis of distribution by weight would be meaningless.

**Vertical distribution.** Units A-D were situated on the southern half of the site. Of these, Units A and C yielded the most ceramic material (Figure 4-11), accounting for 11 of the 18 sherds recovered at the site. Only one sherd was recovered from Unit B, and none from Unit D even though it lay a mere 1 meter from the more productive Units A and C. All of the sherds from the southern part of the site were from imported vessels. However, none was decorated. A rim sherd from Unit A exhibited an inturned shoulder and a flat rim top, but no other decorative motif. The most interesting components of these units' ceramic assemblage were two imported sherds with a unusual temper of crushed shell mixed with minerals. These sherds do not cross-mend but are almost certainly from the same vessel.

Unit E and Test Units 1-4 were located on the northern half of the site. There was a pronounced difference between Test Units 3 and 4 on the south end of the transect and Test Units 1 and 2 on the north end. The southerly Test Units 3 and 4 were characterized by light, sandy soil with no rocks. In contrast, Test Units 1 and 2 had dark, extremely rocky soils. From this, I inferred that Test Units 3 and 4 may have been located on an area which had been intentionally picked and swept clean, possibly as the floor of a house or shelter of some sort, while Test Units 1 and 2 were potentially situated on an associated kitchen midden. Unit E was placed midway between Test Units 1 and 2 to further explore this feature. Overall, only six sherds were recovered from the 4 test units and Unit E. Test Unit 3 yielded the only other rim sherd at the site, which, like the specimen from Unit A, exhibited an inturned shoulder and flat rim top. The two Palmetto ware sherds found at Gibbs Cay were recovered from Unit E.

**Horizontal distribution.** At first glance, the fact that Units A-E all terminated at Level 5 suggests that the Gibbs Cay deposits are fairly deep. In reality the deposit is shallow, and all units terminated at sterile soil somewhere between 35 and 41 cm below the surface (Table 4-2).

This is due to the slope of the site. Level 1 never covered the entire surface of any unit. In some cases, the surface in a downhill corner was not touched until other parts of the unit were well into Level 3. The horizontal profile of Gibbs Cay must be viewed in this context.

Level 4 was the most productive horizontal layer of the site, with 7 of 18 sherds (Figure 4-12). Levels 3 and 5 were tied for second with 4 of 18 apiece. The remaining 2 sherds were recovered from Level 2, and none was present in Level 1. Imported ceramics were recovered in each Level from 2 through 5. The two Palmetto ware sherds were recovered in Levels 3 and 4 of Unit E. The slope was particularly acute in Unit E, and I noted in my journal that “we’re getting surface [junk] like bits of metal in L3”. In actuality, the Palmetto sherds were recovered at or within 10 cm of the surface.

**Analysis.** Compared to the other sites we excavated, the Gibbs Cay ceramic assemblage is small and unremarkable. Imported ceramics dominate the assemblage. However, the lack of any diagnostic decorative motifs makes it difficult to classify these as either Meillacan or Chican, and microscopic paste analyses of the material were not attempted. The two rim sherds are equally uninformative: they bear no decoration and exhibit the inturned shoulders and flat rim tops which are common to vessels manufactured in both the Meillacan and Chican traditions (Rouse 1939,1941; Rainey 1941). However, the ratio of imported sherds to Palmetto ware ceramics provides some useful insight. As discussed in Chapter 1, Chican ceramics are contemporaneous with Palmetto ware, and these two styles are frequently recovered in the same context. Meillacan ceramics are earlier and are not commonly found in association with Palmetto ware in the Turks & Caicos. Because the Gibbs Cay assemblage has little Palmetto ware, it is reasonable to hypothesize that the site was most intensively occupied prior to the

widespread distribution of these locally-manufactured ceramics, which suggests that the imported ceramics are Meillacan, not Chican.

Still, the presence of any Palmetto ware at all is somewhat anomalous for a site so close to Grand Turk. In general, Palmetto ware is quite rare on that island (Keegan 2007:85). So why is Palmetto ware present at all in the Gibbs Cay deposits? There are two possible explanations.

First, Gibbs Cay could be a multi-component site with both a Palmetto ware and a Meillacan assemblage. Because Palmetto ware was manufactured later in regional prehistory, these ceramics are usually found at or near the surface at multi-component sites, with the earlier Meillacan-era deposits underneath. When tourist activity at Gibbs Cay is factored into the equation, it is possible that there was once much Palmetto ware on the surface, that much of this was collected, and that these two sherds are all that remain of a much larger Palmetto ware footprint.

The second scenario is that the two small Palmetto ware sherds were the result of an isolated “pot drop” sometime after the site’s primary period of occupation. Many “sites” in the Turks & Caicos are little more than a few isolated Palmetto sherds. Middle Caicos alone has dozens of such “sites” (Sullivan 1981), and it is now widely understood that “Palmetto ware can occur independent of areas that were occupied as villages” (Keegan et al 1990:8). Given the absence of any other Palmetto ware in the shallow layers of the deposit, this alternative makes the most sense. If there were a substantial Palmetto ware-era occupation of the site, one would expect to find something more, because even souvenir-hunters are not that thorough. Very likely the Palmetto ware at Gibbs Cay reflects small-scale use of the island well after the formal occupation was abandoned. As discussed in chapter 1, this pot drop could reflect something as simple as a group of fishermen breaking for lunch.

In sum, the ceramic assemblage suggests that the Gibbs Cay site is a Meillacan-era occupation. If so, the Gibbs Cay site would be culturally and/or temporally linked to other Meillacan sites in the region, such as Governor's Beach or GT-4 on Grand Turk, or perhaps those in the Caicos Islands. Even though the assemblage is small, and the limited sample makes it difficult to statistically prove this scenario, this explanation best fits the available evidence.

### **The faunal assemblage**

**Vertebrates.** The assemblage is quite large for such a small site: we recovered a bag of vertebrate faunal material from every one of the 29 FS proveniences cataloged at Gibbs Cay. Moreover, my field journal is replete with pithy observations like "Lots of bone in Unit A, Level 3", "Fish bones aplenty in Level 4 , Units A and B", and "Very seriously large fish bones in Unit D, Levels 2 and 3 horizon". However, a detailed analysis of the vertebrate faunal assemblage at Gibbs Cay was not completed.

**Invertebrates.** The invertebrate faunal record was analyzed and much can be ascertained from these materials. The assemblage consists of 14 taxa and includes 10 types of mollusks, 3 corals, and the ubiquitous West Indian Fuzzy Chiton (Table 4-3). The most common invertebrate at Gibbs Cay was the West Indian Topsnail (*Cittarium pica*), which thrives along the rocky intertidal shorelines of Gibbs and the other Turks Bank cays. With an MNI of 126, the topsnail outnumbered conch (*Strombus gigas*) by a ratio of 5 to 1. In fact, conch was noticeably infrequent in the deposit (MNI=28), perhaps because this species finds the deeper, rougher water of the Turks Bank less salubrious than the calmer shallows of the Caicos Bank, where they are more abundant. Interestingly, the size of the conchs we recovered skews toward smaller individuals. Of the 22 shells we measured, 20 were juveniles and/or young adults less than 20 cm in length (Table 4-3). These smaller shells may have been brought to the site to be formed

into shell tools (see Jones O'Day and Keegan 2001). Cracked and broken conch, which are as common as sunshine at most Caicos Bank sites, are virtually nonexistent at Gibbs Cay—we recovered a scant 0.2 liters among nearly 3,000 liters of screened matrix. Three expedient conch shell tools are among the 28 MNI. Two were small picks, and the third a medium hammer.

None of the other marine invertebrates listed in Table 4-3 was abundant. Four periwinkles and two nerites were identified, and the rest of the mollusks were represented by a single specimen. Three species of coral were identified in small quantities. None of these showed clear evidence of abrasion or other use wear.

**Analysis.** The volume and widespread distribution of fish bones suggests that the residents engaged in a concerted effort to exploit this abundant resource. It is widely thought that people from Hispaniola visited the Turks & Caicos to engage in craft production and catch and cure fish for export during the seasons when they would not have otherwise been engaged in activities at home (Keegan 2007:88, Keegan et al. 1994:22). Very likely, Gibbs Cay fits into that paradigm, along with the Governor's Beach site on nearby Grand Turk. Testing this hypothesis will require a thorough analysis of the vertebrate fauna to determine which species were being taken and how these were captured and processed. An analysis of the many otoliths we recovered at Gibbs Cay might also shed light on the seasonal timing of these activities.

The ratio of fish and topsnail to conch reveals a great deal about the diet and economy at the site. Topsnail mollusks are an abundant and simple food option on Gibbs Cay. This gastropod is easily collected by walking along the shoreline at low tide—one does not even need a boat. As such, it is unsurprising that this species constituted a substantial portion of the invertebrate faunal assemblage. The dearth of conch at the site is another matter. One's first impulse would be to blame this anomaly on souvenir-hungry tourists picking the surface clean of

“Indian” artifacts. While they almost certainly are responsible for skewing the sample at some level, I do not believe it is appropriate to lay the matter entirely at the tourists’ feet. Conch was rare in the subsurface deposits as well. There are two alternative explanations for this fact. First, conch shells may never have been brought to the site in great numbers, reflecting collection techniques in which the animal was extracted shortly after capture and its shell discarded elsewhere. Jones O’Day and Keegan argue that the only shells brought to a site were those the Indians used to line fire pits or intended to manufacture into shell tools (2001:281-282). We did find several expedient *Strombus* shell tools among the 25 individuals we recovered, which seems to support this idea. However, we did not encounter any large conch piles anywhere on Gibbs Cay, or for that matter, on any of the other small cays we visited on the Turks Bank. If they were processing conch and piling discarded shells somewhere other than at the site, then we have yet to identify the location of that activity. Second, it is possible that conch was simply not as important as other foodstuffs, like fishes and topsnails. Even without a detailed analysis of the vertebrate faunal record, it is clear that fishes played a major role in the diet and economy of Gibbs Cay. In this regard, Gibbs Cay again looks similar to the Governor’s Beach site, where fish, particularly grunts (*Haemulon* sp.), dominate the faunal assemblage and conch is virtually absent (Carlson 1999:146; Keegan et al. 1994:44). This may reflect an effort to minimize the amount of time spent on food procurement in order to focus on the primary task: bead production. “Laying traps in a shallow reef or netting in the sandy shallows may have been the easiest way to meet basic subsistence needs while performing the primary task here” (Carlson 1999:146). Because these fish are a bountiful and largely effortless catch (they trap themselves, after all), the need to forage for more difficult to collect foodstuffs like conch is diminished. Moreover, it is possible that conch may also have been a less socially acceptable food item

(Keegan 2007:90), particularly when fresh fish was always available in abundance. Absent a more complete understanding of the Gibbs Cay vertebrate faunal record, it is not unreasonable to argue that similar activities were taking place at Gibbs Cay.

In a different vein, the distribution of the invertebrate faunal assemblage offers clear insight into how the site was laid out. The largest concentration of topsnail was found in a single subterranean midden in the northern part of the site. Together, Test Units 1, 2, and 3 at the northern end of the transect and Unit E between Test Units 1 and 2 contained 89 of the 126 specimens we recovered. Interestingly, the southernmost Test Unit 4 did not contain a single specimen. Recall that the soils in Test Units 3 and 4 were light colored and rock-free, suggesting that the area had been swept clean and maintained thereafter. This was interpreted to be a possible structure floor. However, Test Unit 3 yielded a large number of topsnails below the surface. This seemed incongruous until I considered that Gibbs Cay was probably occupied only sporadically. Perhaps the structure whose floor I observed was rebuilt after a period of vacancy. At that time it was either expanded in size or relocated a few meters to the north to encompass the area around Test Unit 3 sometime after the topsnail in that unit had been deposited. From that point on additional material would have continued to accumulate in a midden north of the structure, in the dark-soiled, rocky area where Unit E and Test Units 1 and 2 were situated, while the area around Test Units 3 and 4 was kept clean. Alternatively, the light colored, rock-free soil in this area may have been intentionally relocated from the beach area in an effort to level the natural slope of the site. If so, then it logically follows that the residents would not have relocated the topsnail shells situated around Test Unit 3 as part of this effort, instead choosing to leave them there as part of the fill. That the site now slopes considerably toward the beach may be due to erosion of this infill over the intervening centuries. In any event, the nature of the

matrix and the lack of material in Test Unit 4 suggests that this part of the site was regularly maintained and that garbage was never deposited there. This adds credence to the hypothesis that a structure was once located on this part of the site.

### **Other cultural material**

Gibbs Cay fits the standard profile where individuals were manufacturing beads as part of the overall strategy of resource exploitation for export. Six unfinished round bead blanks and one completed *Olivella* bead were identified (Figure 4-13). Of the round blanks, three were manufactured from the fire-red shell of the *Chama sarda* mollusk. Two of the blanks appear to be manufactured from conch shell, and the final blank from a brown and white banded shell of unknown identity (Figure 4-13, upper right).

### **Radiocarbon chronology**

Two radiocarbon dates were obtained from Gibbs Cay. The first was obtained from a *Strombus gigas* shell recovered from Unit A, Level 3, which was positioned approximately 25 cm below the surface. The shell had been fashioned into a small pick that weighed 45 grams. I intentionally selected a tool to ensure that there was a definite cultural affinity and the shell had not found its way into the deposit via any natural process. It was dated using the standard radiocarbon method and assigned designation Beta 242676. Although the date was calibrated and adjusted for local reservoir correction, it yielded a figure outside of the range I expected. The intercept of the radiocarbon age with the calibration curve occurred at Cal AD 1620, with a two-sigma range of Cal AD 1490 to 1680 (Appendix C). Given the outlying nature of these results, I subsequently submitted a charcoal sample obtained from Unit A, Level 4. It was analyzed via AMS and assigned designation Beta 253527. This date was in line with

expectations: the intercept occurred at Cal AD 1260 with a two-sigma range of Cal AD 1170 to 1280 (Appendix C).

The radiocarbon date on charcoal demonstrates that Gibbs Cay was occupied during the Meillacan phase, and was contemporaneous with a number of sites in the Turks & Caicos. Most significantly, it clearly coincides with the occupation of the Governor's Beach site on nearby Grand Turk. Five radiocarbon dates were obtained from Governor's Beach (Table 4-4). Four of these cluster between AD 1215 and AD 1307, and the Gibbs Cay date of AD 1260 falls squarely in the middle of this range. In the Caicos Islands, this date overlaps with those I obtained from Middleton Cay and Spud, as well as dates others obtained from MC-12, MC-32, and MC-36 on Middle Caicos, P-1 on Providenciales, and PC-1 on Pine Cay (Carlson 1999:144).

The Gibbs Cay radiocarbon results are significant for three reasons. First, they corroborate the testimony of Gibbs Cay's ceramic and faunal records that the site may have been linked to Governor's Beach and is contemporaneous with numerous villages in the Caicos Islands. Second, it offers additional evidence that making beads for export was, for a very long time, one of the primary economic activities in the southern Bahama archipelago. Third, obtaining a date of AD 1260 from yet another site dominated by imported Meillacan ceramics is further proof that Hispaniolans were still actively producing vessels in this tradition well into the 13<sup>th</sup> century, and that Palmetto ware had not yet "replaced" imported ceramics in the southern Bahamas by that time.

The Gibbs Cay radiocarbon results also suggest something extraordinary. The Cal AD 1620 date obtained from the expedient conch shell tool indicates that indigenous peoples may have survived in the Turks & Caicos further beyond contact than is currently thought. Although the two-sigma range begins at AD 1490, the date contributes to a growing body of radiocarbon

evidence that the Bahama archipelago was not completely depopulated within 20 years of the Spaniards' arrival. This matter will be explored in greater detail in the final chapter of this dissertation.

### **Interpretation of Gibbs Cay**

Gibbs Cay falls into the “Outpost” category of small cay sites. The ceramic, faunal, and radiocarbon data all place Gibbs Cay in the same context with the Governor’s Beach site and perhaps GT-4 on Grand Turk, as well as numerous sites in the Caicos Islands. All of these sites (or early horizons of sites) are marked by Meillacan ceramics and date to the 13<sup>th</sup> century AD. Gibbs Cay provides additional evidence that during this time, Meillacan-producing groups from northern Hispaniola were regularly exploiting the southern Bahamas for a variety of resources, such as beads made from the *Chama sarda* mollusk, as well as foodstuffs like fish and conch.

Although there are clear similarities between Gibbs Cay and Governor’s Beach, the exact relationship between the sites is difficult to determine with certainty. Several scenarios are possible. First, the sites could have been occupied at the same time by two separate, but related groups that both knew of and interacted with each other. The two sites lie approximately 2 km apart, which fits nicely within Keegan’s concept of settlement pairs (1992:83-84). Yet the data do not strongly support such a hypothesis. The two sites are small and impermanent, and as such, would not have experienced the social and demographic pressures that Keegan has argued can drive part of a site’s population to cleave off and form a new pair village. A second, and more plausible scenario, is that Gibbs Cay and Governor’s beach were occupied *around* the same time by the same group and/or related groups of people, but not simultaneously. In this case, the group(s) might have bounced back and forth from week to week, month to month, or season to season, as has been hypothesized for MC-8 and MC-10 on Middle Caicos (Sinelli 2001:121).

Finally, it is conceivable that Gibbs Cay was occupied after Governor's Beach after that Grand Turk site had been forcibly abandoned. It has been argued that the demise of Governor's Beach was not voluntary:

[T]here is evidence for the sudden disruption of activities at the site. A variety of valued objects were abandoned or destroyed, including almost 400 shell beads (which were thrown into a fire), several effigy vessels (including [a] porcupinefish vessel), and exotic tools and other objects... The evidence suggests that a battle [at Governor's Beach] may have taken place, in which the Meillacan peoples were forced to leave the island for good (Keegan 2007:90).

By virtue of its location and topography, Gibbs Cay is far more defensible than any other island in the area. The apex of Gibbs Cay lies approximately 50 meters above sea level, and affords an unobstructed, 360-degree view of the surrounding waters for tens of kilometers (the French recognized this, which is why they put cannons there). Moreover, this peak is surrounded by a slope so steep that the apex is only approachable from 3 sides. If the residents of Governor's Beach had been driven off, then Gibbs Cay would have been an excellent tactical place to resettle. A lookout on top of the hill would have easily seen any approaching canoes long before they reached the island. If the strangers drew near, the entire retinue would have had ample time to collect their valuables and retreat to the top of the hill. Any attack would have not only lost the element of surprise, but also faced the daunting challenge of attacking up a steep slope into the teeth of a well-prepared defense. Unfortunately, there is no evidence to prove that this scenario actually played out. Yet common sense dictates that people learn from a rout, and the virtues of holding the "high ground" in times of conflict would not have been lost on the settlers.

Exploring the particulars of the "battle" at Governor's Beach may also provide insight into the relationship between Gibbs Cay and the many contemporaneous Meillacan sites in the Caicos islands. If there were a battle, then who was involved? Carlson suggests that the

antagonists may have been the Ostionan producing peoples who inhabited the Coralie site on the other end of Grand Turk. The radiocarbon data from both sites indicate a period of overlap in the late 12<sup>th</sup> and early 13<sup>th</sup> centuries (Carlson 1999:52,144). Moreover, a single Ostionan sherd was recovered from the otherwise exclusively Meillac assemblage at Governor's Beach, suggesting that some interaction indeed took place (Carlson 1993). Alternatively, Keegan suggests that the conquerors came from the west: “[W]hom did they fight? One possibility is that the Lucayans who had been living in the Caicos Islands for about two centuries began to exert their authority over all of these islands at this time” (Keegan 2007:90).

Several lines of evidence from Gibbs Cay help us evaluate these possibilities. It is clear that Gibbs Cay and Governor's Beach are related, based upon the temporal overlap, similarities between the material assemblages, and the rather obvious fact that the sites are located so near each other that the residents of one could not possibly have been ignorant of the existence of the other. Therefore, it is reasonable to assume that Governor's Beach and Gibbs Cay were inhabited by the same group, even if it is difficult to establish the exact timing of the respective occupations. If so, then where did these people live the rest of the time? There are two possibilities. Either the Meillac producing peoples of Grand Turk and Gibbs Cay hailed from Hispaniola, or they came from one or more of the many contemporary Meillacan sites in the Caicos islands. Based on the evidence (some of which is admittedly circumstantial), I argue that they hailed from Hispaniola.

Dates from Pelican Cay (AD 1050) demonstrate that Meillacan affiliated peoples had been living in the Caicos islands two centuries before the establishment of Governor's Beach and Gibbs Cay. By the time the Grand Turk sites were founded, nearly a dozen Meillacan sites were active, at least seasonally, around the Caicos Bank. Essentially, the Caicos Bank and all its

bounty had been “claimed,” and it follows that its residents would have resisted new groups of immigrants, particularly if they hailed from a different area along the north coast of Hispaniola. Yet the Turks Bank had always been less intensively occupied, and any group in the 13<sup>th</sup> century that wanted to enrich themselves via beadmaking and food-procuring activities would have had a far easier time setting up shop on these islands east of the Columbus Passage. These new migrants may have escaped the notice of their neighbors to the west for some time. But eventual contact would have been inevitable, and it is possible that people from the established sites in the Caicos Islands decided that no squatters, period, would inhabit the southern Bahamas. Since the “Caicos Bankers” would have easily outnumbered the “Turks Bankers,” driving people out of Governor’s Beach and/or Gibbs Cay would have been a fairly simple task. How this transpired, and if there was some Lucayan version of Custer’s Last Stand at Gibbs Cay, is best left to the imagination.

Reconstructing all of these possible scenarios is, for me, one of the most enjoyable aspects of archaeology. It is an intriguing mental exercise, but unfortunately, one that rarely yields unassailable conclusions. Still, it is clear that Gibbs Cay and Governor’s Beach were related, and that suddenly, toward the end of the 13<sup>th</sup> century, the people who lived at these sites disappeared and never returned. The only indication that any indigenous people exploited Grand Turk or its environs after the late 13<sup>th</sup> century comes from the Cal AD 1620 date from Gibbs Cay. Given the temporal disconnect, these people would clearly not have been affiliated with Meillacan-producing peoples in Hispaniola. If indigenous peoples were using Gibbs Cay after European contact, then they had nothing to do with the people who lived there more than 300 years earlier.

## Cotton Cay

### Data

#### Physical description of Cotton Cay

Cotton Cay is situated 5.9 km south of Grand Turk and 2.6 km northeast of Salt Cay, and is the largest currently uninhabited island in the Turks group. It is roughly football shaped, with its long axis oriented on a west-southwest to east-northeast bearing. The island is 2.3 km long, and between 200 and 800 meters wide, for a total land area of 112.52 hectares (Department of Economic Planning and Statistics 2008b).

The landscape of Cotton Cay is different from those of the other uninhabited Turks Bank cays we visited. Topographically, the island is roughly bowl shaped. The “rim” of the bowl consists of a ridge that abuts all of the eastern, northern, and western shorelines, and a good portion of the southern shore. The ridge mostly rises abruptly from the sea, so that flat, sandy beaches are narrow, infrequent, and unevenly distributed. Unsurprisingly, both of the Cotton Cay sites are situated on parts of the ridge that are adjacent to the only beaches on the northern coast (Figure 4-14). The ridge is highest at the eastern extremity of the island, but not so high as to completely stop large crashing waves approaching from windward. In fact, Cotton Cay has one of the most impressive natural rock walls of any island where we observed this phenomenon (Figure 4-15). Although waterborne debris is common along the windward ridge, even at elevations of 6 to 8 meters above sea level (Figure 4-16), there is no evidence that waves penetrate very deeply from the east into the island’s interior. The interior of Cotton Cay is relatively flat and dotted with intermittently-flooded salinas that presumably fill in occasionally through gaps in the ridge along the southern shore (Figure 4-17). In this regard, the island looks more like the salt-producing islands of Grand Turk and Salt Cay, although that industry was

never established in this place during the European era. Cotton Cay, as its name implies, was a farming island.

Cotton Cay was the only island east of the Caicos to be intensively farmed during the Loyalist Period of the late 18<sup>th</sup> and early 19<sup>th</sup> centuries. These activities altered the landscape in ways that remain apparent more than two centuries later. The western half of the island is replete with plantation-era ruins. The partial walls of a house or structure lie roughly 50 meters from Cotton Cay's westernmost shore, and hundreds of meters of rock walls meander in various directions across the area. Several walled enclosures are also visible (Figure 4-18), suggesting that animals may have been raised in addition to the sea island cotton for which the island is named.

Like all of the Turks Islands, Cotton Cay is quite dry. Nevertheless, sea grape, cactus, and other xeric vegetation seem to do well, and much of the island is densely vegetated (Figure 4-17). In general these plants would seem to make Cotton Cay a favorable place for wildlife, but we found very little fauna save some small *Anolis* lizards and a few water birds. It is possible that some unseen feral creatures inhabit the island. It is also possible that the local biota never recovered from plantation era activities, which would have dramatically altered the island's natural ecology.

Cotton Cay remains in the hands of the family that obtained the original land grant at the end of the Revolutionary War. As private real estate, it is not under the umbrella of any of the national parks or sanctuaries that protect most of the other cays on the Turks Bank. Even so, no one has lived on the island for generations, and until very recently few people have ever bothered to visit there. This changed when the Grand Turk Cruise Terminal opened in 2006. Now for only \$89, one can "Go sailing aboard a luxurious catamaran to the uninhabited island of Cotton

Cay, [and] snorkel near an underwater coral reef paradise teeming with bright tropical marine life”, via a Carnival Cruise Lines shore excursion (Carnival Cruise Lines 2009).

### **Previous archaeological research at Cotton Cay**

Brian Riggs discovered the two sites on Cotton Cay while on one of his self-described “bush rambles.” Shortly thereafter, Keegan returned to the island with a team of volunteers to examine the sites more closely. The following description of his work provides an excellent introduction to the archaeology of Cotton Cay:

Surface collections and test excavations at the Cotton Cay sites were made on January 16, 1993. The easternmost site, CC-2, is on a high bluff with the ocean to the north and a now-dry salina to the south. The surface was littered with mollusk shells, pottery, and fire-cracked limestone. Both Palmetto Ware and imported pottery was recovered, as was a single melado ware sherd of a style that dates to the early 16<sup>th</sup> century. Although the surface shows signs of erosion, test excavations revealed that the site has 10 to 30 cm of soil with the anthropogenic discoloration that is typical of a habitation site. At CC-1, imported pottery predominates, including a sherd with a red-painted interior. A carved coral cemi was recovered during a previous visit to the site. The site has extremely black soil to a depth of 50 cm (Keegan et al. 1994:10-11).

Several important facts can be gleaned from this brief description. First, it is apparent that Cotton Cay was settled by different groups of people at different times. No radiocarbon dates have been obtained from these sites, but relative dating techniques indicate that CC-1 and CC-2 were not occupied simultaneously. CC-1, by virtue of its predominantly imported ceramic assemblage was probably occupied first. CC-2, with its mixed assemblage of imported and Palmetto ware ceramics, was occupied later. Second, CC-1 is probably a Meillacan site roughly contemporaneous with Governor’s Beach and Gibbs Cay to the north. As I have discussed, imported ceramics recovered from a context with little or no Palmetto ware are very likely Meillacan. If they were Chican, then it is far more likely that Palmetto ware would be present.

Finally, CC-2 must have been a very late site occupied within the context of European contact.

The melado ware sherd discovered at the site could not have been acquired prior to the arrival of the Spanish.

Unfortunately, little else has been written about indigenous usage of Cotton Cay.

Moreover, the scant literature that exists has never been synthesized into a broader regional analysis of indigenous settlement patterns in the southern Bahama archipelago. My work was designed to address these issues and formulate a more complete understanding of the role Cotton Cay played in regional prehistory and the early post-contact period. The introduction provided by Keegan et al. (1994) serves as an excellent foundation upon which to expand this concept.

### **Description of site CC-1.**

Unfortunately I did not have the time to excavate both of the Cotton Cay sites. The owners permitted us to conduct limited test excavations for one day only, and the sites are about 1.3 kilometers apart. This meant that I had to choose one or the other. I decided to visit both sites and then decide which to excavate based on my impressions.

We were dropped off at the westernmost beach on the north coast of the island, very near CC-1. The GPS coordinates that I obtained from the files at the Turks & Caicos National Museum helped us find the site quickly. Like many sites in the region, CC-1 lies on the downward slope behind the ridge/dunes, approximately 40 meters from the beach. This beach is the only one on the northwestern part of the island, and is only 200 meters long by 15 meters wide. The rest of the shoreline is ironstone. After a brief surface reconnaissance it was clear that the site was rather small. We observed a number of very fragmentary imported sherds on the surface, but nothing was diagnostic. I decided to proceed east and use our limited time to excavate CC-2 instead, and we moved on.

## Description of site CC-2

CC-2 is situated 1.3 km east of CC-1, adjacent to the only other sandy beach on the north shore of Cotton Cay. Its beach is even smaller than the one associated with CC-1—it is only 90 meters long by 12 meters wide. The site is situated on a flat area atop the ridge, approximately 3 meters above the high water mark (Figure 4-19). It affords a beautiful view of the Turks Bank, with Grand Turk and all of the other cays visible on the horizon. The view to the south overlooks two salinas in the interior (Figure 4-20). Both are oval shaped and roughly 150 by 90 meters in dimension. The first salina lay 100 meters due south of the site; the second, 115 meters to the southeast. Both salinas were dry at the time but showed evidence (plastic bottles, of course) that they were recently flooded by the sea. If these were open to the sea at the time the site was occupied, then they would have made an excellent natural harbor in which to park canoes and process the daily catch. However, I walked the perimeter of both salinas during our visit and discovered no evidence of such activity.

The surface scatter at CC-2 greatly exceeds that of CC-1, and makes a more powerful first impression. The northernmost extremity of the deposit is eroding slightly out of and down the ridge toward the beach, but almost all of the site remains intact. All of the usual telltales of indigenous occupation are readily apparent in the part of the deposit that is eroding—an abundance of fire-cracked limestone and mollusk shells lies near the top of the ridge. The surface scatter is less plentiful atop the ridge, however, and few ceramics were in evidence anywhere on the surface. The soils are the fine, gray matrix commonly associated with anthropogenic activity.

## **Excavation details**

The boundaries of CC-2 are well defined and it was easy to determine the shape and extent of the site. The site is ovoid, 50 meters long and between 24 and 30 meters wide. An oval-shaped cleared area measuring 30 by 10 meters lay in the center of the site. This appeared at once to be the primary occupation area. The surface within the central oval consists primarily of gray anthrosol with few rocks and little cultural material. It is surrounded on all sides by a 6 to 12.5 meter wide ring of exposed limestone, rock piles, burnt limestone, broken mollusk shells, and (according to my field notes) “other cleared and burned stuff that you can’t dig in.” All observed features were within the outer ring; no middening of any kind was detected in the interior oval, which was uniformly flat. Compared to a site like Gibbs Cay, it was quite easy to determine how the residents of CC-2 set up camp. They cleared the center and threw the rocks and some of their garbage on the periphery.

The entire team participated in the excavations at CC-2 on June 12, 2004. As mentioned above, we were only allowed to visit the island for one day and we did not have permission to conduct anything more than test excavations. Consequently, I erected a transect directly down the middle of the interior oval portion of the site, and spaced 50 x 50 cm test units every three meters along the transect. A total of 9 units, designated 1-9, were completed (Figure 4-21). All units were excavated by trowel and brush to either bedrock or sterile soil. All matrix was screened through  $\frac{1}{4}$  inch hardware cloth mesh. The excavations yielded a total of 15 field specimen (FS) proveniences. Each FS provenience corresponds to a 20 cm stratigraphic level. I elected to work in 20 cm levels rather than the customary 10 cm levels because the deposit was shallow and the 50 x 50 units contain only 25% of the volume of traditional 1 x 1 meter units. Moreover, our objectives at CC-2 were different from those of other sites we excavated. Given

that we had but a single day, we needed to test the site, not dissect it, and we had to proceed with alacrity. Overall, it seemed like a reasonable compromise between lumping all of the material recovered from 50 x 50 units into a single provenience—as I had at Gibbs Cay, Middleton Cay, and Spud—and proceeding in 10 cm strata as I had with all of the larger units.

## Results

### The ceramic assemblage

**Overview.** We certainly did not encounter an abundance of ceramics in the subsurface deposits of CC-2. The 9 test units yielded a total of 23 sherds weighing a combined 73 grams (Table 4-5). Palmetto ware dominated the assemblage both in number (Figure 4-22) and by weight (Figure 4-23). Twenty-one of the 23 sherds (91.3%) accounting for 94.5% of the total weight of the site's ceramic assemblage were from Palmetto ware vessels. Most of the sherds were small, there were no rim sherds, and no sherd bore any decoration. Of the two imported sherds, there was one small (1 gram) undecorated body sherd and one medium (3 gram) inturned shoulder sherd. Neither was decorated.

For CC-2, the analysis of the vertical and horizontal distributions of the ceramic assemblage is limited to sherd count only and is not broken down by weight. At 73 grams, the total weight of the CC-2 ceramic assemblage is quite small, and any analysis of distribution by this measure is too open to bias to be constructive.

**Vertical distribution.** Units 5, 6, and 7 near the center of the transect produced the lion's share of the ceramic assemblage (Figure 4-24). These three units accounted for 19 of the 23 sherds recovered at the site. Of the remainder, three sherds, including the two imports, were obtained from Unit 1. The lone remaining Palmetto ware sherd was recovered from Unit 4.

Units 2 and 3 at the east end of the site, and Units 8 and 9 at the west end, did not yield any ceramic material.

**Horizontal distribution.** As I mentioned, the conditions placed upon our excavations at CC-2 led me to employ 20 cm levels. While the interpretation of the ceramic assemblage's horizontal distribution is more coarse than for other sites, it nevertheless provides some interesting insights.

The entire transect was approximately 30 meters from end to end. Because this was a manageable distance, and because the site's terrain was essentially flat and featureless, all of the units were tied into a single datum that was established in the center of the transect near Unit 5. The line was attached to a stout stick that was hammered deeply into the ground. The string upon which the line-level was affixed was attached to a notched point on the stick precisely 10 cm above the surface. All measurements were obtained from the center of each unit—we did not measure the depth at each corner since these were 50 x 50 cm units. When measurements were taken, a student held the stick firmly and every effort was made to ensure that the line was kept as taught as possible. As a result, I am confident in the overall integrity of the depth measurements of each unit to within a centimeter or two. Based on these measurements, we determined that the deposit at CC-2 was shallow, and ranged in depth from 5 cm to 37 cm below the surface (Table 4-6). As we were working within the rubric of 20 cm strata, this corresponds to two levels—Level 1 and Level 2.

An examination of the vertical distribution of the ceramic assemblage reveals that Level 2 of the site yielded 15 of the 23 sherds in the assemblage, while Level 1 produced only 8 (Figure 4-25). All of the ceramics recovered from the lower level were Palmetto ware, some of which were directly atop bedrock. The two imported sherds, as well as the remaining 6 Palmetto

ware sherds, were obtained from the upper level. Thus we have a situation at CC-2 where Palmetto ware is not only found in context with, but also superimposed by, imported ceramics from Hispaniola.

**Analysis.** In spite of the small sample size, the CC-2 ceramic assemblage is informative. Our discovery of Palmetto ware in the lowest levels and throughout the site's deposits supports the notion that CC-2 was first established in late prehistory. The two imported sherds were not diagnostic, but the fact that they were recovered above Palmetto ware in the upper layer of the deposit is strong circumstantial evidence that these belong to the Chican subseries. Meillacan ceramics were manufactured in Hispaniola into the 14<sup>th</sup> century, but this style had disappeared by the time Europeans arrived in the West Indies. Although we did not recover any additional items of European manufacture, the melado ware sherd identified by Keegan et al. (1994:9) indicates that the occupation persisted until well after Spanish contact in the late 15<sup>th</sup> century. As such, CC-2 may represent one of the last episodes—if not the final act—of indigenous settlement in the Turks islands.

### **The faunal assemblage**

**Vertebrates.** We recovered one bag of vertebrate faunal material from 14 of the 15 FS proveniences at the site. Unit 9 (FS 15) was the only provenience to yield no bones. Although the material was present throughout the horizontal layers of the deposit, I noted in my field journal that there was a marked increase in the volume of faunal remains “just before bedrock.” This feature seemed most noticeable in the middle of the site, where Units 3-7 were placed. In Unit 5, the amplification of faunal material was associated with a distinct “increase in burnt material” and a clear ashy feature within extremely dark soil at the Level 1/Level 2 horizon, 20 cm below the surface and 8 cm above bedrock. Unit 5 was located at the center of the transect

and very close to the exact center of the site. It appears that much of the cooking was done here during the site's earlier occupation horizon.

**Invertebrates.** The invertebrate faunal assemblage at CC-2 was analyzed. Compared to other sites in the Turks & Caicos, the assemblage is small and rather pedestrian. This is more likely a product of my sampling methodology than a statement about the intensity and duration of indigenous occupation. Because our allotted time was extremely limited (about four hours), I only collected and analyzed invertebrate faunal material that was excavated from the nine 50 x 50 cm test units. Between the size of the units and the shallowness of the deposit, we screened only 0.56 cubic meters of matrix, which is less than a sixth of the volume processed at Gibbs Cay.

The invertebrate faunal assemblage at CC-2 consists of 8 taxa and includes 4 mollusks and 4 corals. Conch (MNI=17) and top shell (MNI=11) are the dominant mollusks (Table 5-7). Again, many more specimens of these taxa were observed on the surface but not collected. Four of the analyzed conch shells were formed into tools, including 2 conch "knippers" or small pick tips (Keegan 2007:88) and 2 medium hammers. All of the tools were recovered from Units 1, 2 and 3 on the east end of the site. The remaining mollusks were a single, broken *Oliva* shell bead from Unit 1 and 2 intact halves of the *Chama sarda* bivalve from Unit 2. *Acropora cervicornis* was the most abundant coral. The abrader and almost all of the raw material (279/294 grams) was recovered from Unit 2. The brain coral (*Diploria* sp.) was found in three clusters in Units 1, 3 and 5. The remaining corals were represented by a single, small specimen.

**Analysis.** Although the data are limited, the faunal assemblage at CC-2 provides clues about the timing of the occupation as well as the manner in which the site was laid out. First, the concentration of bones in the lower stratum suggests that the site was more intensively occupied

shortly after inception, and that usage decreased over time. Either more people lived there earlier on, or they lived there for a longer period of time, or both. Second, the burned material and extremely dark and ashy soil feature at the Level 1/Level 2 horizon in Unit 5 suggests that the residents maintained their cooking fire at that spot, which is almost exactly in the center of the oval-shaped site. Finally, all of the things associated with bead production—conch tools, intact *Chama sarda* shells, and the raw *Acropora cervicornis* stems and the abrader—were found in Units 1-3. Thus it appears that beadmaking activities were concentrated at the eastern end of the site.

### **Other cultural material**

At CC-2, we screened about one-sixth as much matrix as at Gibbs Cay. Yet we found more than twice as many bead blanks ( $n=14$  versus  $n=6$ ). All of the blanks were rounded—some better than others—but only one was drilled. Interestingly, they were manufactured from a variety of raw materials and no one particular taxon seems to dominate (Figure 4-26). *Chama sarda*, conch, topsnail, and what might be *Tellina* are all represented. There are also several blanks made from shells that I was unable to identify, which is a common frustration because “it is not always possible to tell which shell the finished objects came from” (Keegan 2007:176). Thirteen of the 14 blanks were recovered from the eastern end of the site, which places them in context with the beadmaking materials discussed in the previous section. Remarkably, all thirteen of these blanks were recovered from the upper stratum of the site that lay within 20 cm of the surface. Unit 1, Level 1 accounted for 8 blanks, Unit 2, Level 1 a further 4 blanks, and Unit 3, Level 1 the remaining 1 blank. The only blank obtained outside of this context was recovered from Level 2 of Unit 7, near the western end of CC-2.

I have discussed the prevalence of beadmaking in the region earlier in this dissertation. Even within this framework, CC-2 stands out. The ceramic evidence clearly indicates that CC-2 is a Palmetto-era site that was occupied even after European contact. As such, it is between two and four centuries later than all of the other sites in the region where beadmaking has been identified as a primary activity. The significance of this discovery, and the role that CC-2 may have played in Lucayan-Spanish relations, is discussed in detail below.

### **Interpretation of CC-2**

Based on the ceramic, faunal, and beadmaking assemblages at CC-2, it is possible to formulate a picture of how the site was utilized. This in turn sheds light on the role CC-2 may have played in regional settlement patterns over time.

The site's small size, shallow deposits, and limited material culture place CC-2 neatly within the "outpost" category of my organizational framework. There is no indication that the site was occupied continually over long periods of time, but instead was inhabited on an occasional, seasonal, or perhaps semi-permanent basis by people looking to exploit the locally-available resources. However, it seems likely that the objectives and demographics of those occupying the CC-2 outpost changed over time.

**The Level 2 horizon.** Let us begin at the bottom. Level 2 was left behind by the people who initially established the site, and represents this first phase of occupation. Level 2 contains a ceramic assemblage that consists exclusively of Palmetto ware. Radiocarbon dates were not obtained from the site, but relative dating of any primarily Palmetto ware assemblage establishes with some confidence a floor date of approximately AD 1300. The vertebrate faunal assemblage is also most dense in this level, suggesting that the site was most intensively occupied during this period. This could be caused by a larger population, a more prolonged presence, a more regular

pattern of seasonal occupation, or some combination thereof. The dark, ashy soils and burned materials and bone found in the centrally-located Unit 5 suggest that the site's cooking fire was located in this vicinity. The lack of continuity of this feature in Units 3 and 4, both located 3 meters to either side of Unit 5, supports this notion. The areas peripheral to the hearth could represent a house floor or floors, perhaps arranged on either side of the central plazaette where the hearth was situated and where meal preparation and communal activities took place. Based on Keegan's analysis of house distribution across sites of various dimension, we would expect to find 1 to 3 houses at a site the size of CC-2 (1992:74).

The dearth of bead blanks and beadmaking tools in the Level 2 horizon suggests that the people who established CC-2 were not actively engaged in this activity. Thus, the impetus behind the settlement must have lain elsewhere. Although little is known about CC-1 on the western side of Cotton Cay, it is apparent that the sites are not contemporaries. If so, then the entire island and its environs may have been vacant at the time CC-2 was established. A landscape devoid of humans would have been an attractive draw to settlers, as they would have faced no competition. I argue that this is why CC-2 was first established.

Without a seasonality analysis, it is difficult to gauge the permanence of the Level 2 occupation. Recall that seasonal analysis at GT-2 revealed that the site was occupied during the dry season in February and March (Keegan et al. 1994:22), which Keegan (2007:88) believes reflects a pattern in which groups from Hispaniola visited the Turks & Caicos to exploit resources when things were slow at home. If the Level 2 residents of CC-2 were from Hispaniola, then this model might apply. But the linkage between the first occupants of CC-2 and Hispaniola is tenuous at best. We encountered neither imported ceramics nor any exotic materials of any kind in the lower stratum. We also did not find any evidence of bead

manufacture. While these results could certainly be the product of sampling bias, they raise an intriguing possibility that is worth considering: the people who established CC-2 may not have had any direct ties to Hispaniola. If so, then it is also less likely that they migrated from the Caicos Islands, for it is well documented that sites in the Caicos maintained strong ties to communities along the northern coast of that island. Instead, the pure Palmetto assemblage and the lack of a beadmaking industry makes the Level 2 occupation of CC-2 look more like sites in the central Bahamas. Thus it is possible that CC-2 was settled by peoples from the north drawn by the empty islands and underexploited resources of the Turks Bank. This challenges the conventional thinking that all migration into the southern Bahamas originated in the Greater Antilles, which in and of itself is an idea worth pursuing. It also raises the possibility that CC-2 was occupied on a more permanent basis by a larger and more demographically diverse group than we believe lived at places like Governor's Beach and Gibbs Cay, and that villages in the Turks Islands could indeed survive for an extended period of time.

**The Level 1 horizon.** Let us now examine the upper stratum. There are pronounced differences between it and the underlying deposit. First, there is strong evidence for a dedicated beadmaking industry. All but one of the 14 bead blanks were recovered from Level 1, as were all of the associated beadmaking tools. There is a clear contextual association among these items as well: all of these materials were recovered at the east end of the site in Units 1, 2, and 3. Second is the ceramic assemblage. Keegan's team collected both imported ceramics and Palmetto ware (as well as the Spanish melado ware sherd) from the surface (Keegan et al. 1994:9). Our subsurface tests revealed that Level 1 also contained a mixed assemblage of imported and Palmetto ware ceramics, but that imported pottery was limited to the upper 20 cm of the deposit. Notably, both of the imported sherds we found were recovered from the

beadmaking context at the east end of the site, in Unit 1. This provenience alone accounted for 8 of the 14 bead blanks. These facts imply that the bead makers were the ones who brought the imported ceramics. Finally, the vertebrate faunal assemblage in Level 1 is noticeably less dense. This could result from fewer people, shorter stays, more widely-spaced visits to the island, a decline in taxa availability, or some combination of these factors. In any event, it appears that the site was less intensively occupied later in prehistory than it was initially.

Our excavations revealed that the Level 1 occupation horizon at CC-2 looks similar to beadmaking outposts like Gibbs Cay and Governor's Beach in the Turks islands and MC-8/MC-10 in the Caicos. Yet the pottery at CC-2, and by extension the timing, stands in stark contrast. Gibbs Cay, Governor's Beach, MC-8/MC-10 are all Meillac-era beadmaking sites that date from the 11<sup>th</sup> through 13<sup>th</sup> centuries, whereas Level 1 of CC-2 is a Palmetto/Chican/melado ware beadmaking endeavor that occurred hundreds of years later and in context with Spanish contact. Evidence from Middleton and Spud (see Chapter 5) indicates that beadmaking was common in the Caicos into the 14<sup>th</sup> century. However there is less evidence that it was as widely practiced beyond perhaps AD 1400. This fact raises two obvious questions: who were the CC-2 bead makers, and why did they re-establish a beadmaking industry on Cotton Cay?

**Who were the bead makers?** The Level 1 horizon was a period of less intensive occupation, suggesting that a small group of people occupied the site occasionally for a short time to manufacture shell beads. So where did they live the rest of the time? The presence of imported ceramics on the surface and in Level 1 suggests that, unlike the earlier Level 2 horizon inhabitants of CC-2, the bead makers had ties to Hispaniola. These ties could be manifest in one of two ways. First, the bead makers may have hailed directly from Hispaniola, and commuted from there to the Turks Bank to make beads. If so, then one would expect to see a ceramic

assemblage that consists almost exclusively of imported ceramics in the Level 1 horizon. As Hispaniolans, they would not have had access to Bahamian Palmetto ware. Even if they did, it is unlikely that they would have opted for a technologically inferior product when it was a simple task to bring as many lighter, stronger, and more durable pots as they would need for their brief visit. Of course, we did not observe an exclusively imported assemblage in Level 1 of CC-2—Palmetto ware outnumbers the imported ceramics in this provenience. Therefore it is less likely that the bead makers of the Level 1 horizon came directly from Hispaniola.

A more plausible explanation is that the Level 1 bead makers were from the Caicos islands. Here, a mixed assemblage of Palmetto ware and imported ceramics has been recovered from numerous sites that were occupied after AD 1300, like MC-12, MC-32, and MC-6 on Middle Caicos (Keegan 2007:139-143), and Middleton and Spud on the Caicos Bank (See Chapter 5). Of these sites, two were also occupied after European contact. European brass was recovered from MC-6, and Old World rat bones (*Rattus rattus*) were observed at MC-32 (Keegan 2007:168,182). The melado ware sherd Keegan's team recovered at CC-2 in 1993 indicates that the Level 1 horizon of CC-2 was also occupied after contact. Because the ceramic assemblages are similar and the timing fits, these two sites on Middle Caicos are the best candidates for the home villages of the bead makers.

Because the Level 1 horizon of CC-2 seems linked to MC-6 and MC-32, it is necessary to examine these sites and their relationship with Hispaniola more closely. Keegan (1992,1997,2007) has long argued that MC-6 and MC-32 were sister communities that maintained close social and economic ties in the 15<sup>th</sup> and early 16<sup>th</sup> centuries. They were also socially and economically allied with communities on the north coast of Hispaniola. As the larger and more complex of the two settlements, MC-6 is viewed as a “gateway community”

through which the resources of the southern Bahamas passed to northern Hispaniola (Sullivan 1981:425). Keegan describes the situation succinctly: “The people of MC-6 were entrepreneurs who enhanced their status by supplying the Tainos of Hispaniola with foods and other goods, some of which were no longer readily available in their territories” (2007:184). Exports included salt harvested from Middle Caicos’ seasonal salt pans (Sullivan 1981) as well as “favored fishes,” marine reptiles, and terrestrial vertebrates (Keegan 2007:182-184). Shell beads are not listed among the exports to Hispaniola, presumably because no evidence for an active beadmaking industry was observed at either MC-6 or MC-32. This is interesting because of the long history of beadmaking throughout the Caicos Bank—MC-8/MC-10 are only 1500 meters west of MC-6, and Spud and Middleton lay just over the southern horizon. Moreover, Hispaniolans traditionally placed a premium value upon these exotic items that came from across the sea (Keegan 2007:82). Beads were certainly still in demand in Hispaniola, not only as personal jewelry, but also as an integral part of the woven cotton cemis “that distinguished chiefs during public ceremonies” (Taylor et al. 1997:163). These facts suggest that an effort to manufacture beads for export would still have been a worthy endeavor, yet there is no evidence that it actually occurred at MC-6.

There certainly is no reason the Lucayans could *not* make beads on Middle Caicos in the 15<sup>th</sup> and early 16<sup>th</sup> centuries. That they did not would therefore seem to be a matter of preference. Perhaps trade in salt, cured fish, and other favored foodstuffs was so profitable that there was little incentive to produce other wares for trade. It is also possible that specialized, domestic artisans became more common in Hispaniola as Taino chiefdoms grew in population and complexity, and that they satisfied demand so that imports were no longer necessary. Whatever the reason, the evidence suggests that people from MC-6 and/or MC-32 re-established

a beadmaking enterprise around AD 1500 on Cotton Cay. But why? I believe the answer lies in the contact-era timing of the Level 1 horizon at CC-2, and the changes that followed the arrival of the Spanish in the region.

In her 2004 article “Reconsidering Taino Social Dynamics After Spanish Conquest: Gender and Class in Culture Contact Studies” Dr. Kathleen Deagan explores the preconceptions and realities surrounding the Taino response to Spanish invasion. She draws heavily upon her far-reaching research at En Bas Saline, “the only systematically excavated Taino town site in the Caribbean that was occupied both before and after contact” (Deagan 2004:598). En Bas Saline is located on the northeastern coast of Haiti just east of the modern town of Cap Haitian. It is believed to have been the seat of the paramount cacique Guacanagari (Deagan 2004:605), whose sphere of influence included the north-central coastal areas of Hispaniola, with which the Caicos Bank settlements had long maintained social and economic ties (Cordell 2007, Sinelli 2001). Because of this relationship, Keegan (2007) uses En Bas Saline as a lens through which to understand MC-6. Therefore, Deagan’s analysis provides insight into how the arrival of the Spanish may have trickled down to affect the social and economic fabric of Middle Caicos, and by extension, CC-2, even though the Lucayans were not immediately dealing with the Spaniards in person. Before I explore this idea, it is necessary to review the events that transpired through the first two decades of Spanish/Taino contact, so as to understand the social and political landscape in which the Lucayans suddenly found themselves after 1492.

Columbus’ first encounter with the residents of En Bas Saline came immediately after the *Santa Maria* was wrecked early Christmas morning, 1492 (Morrison 1942:301). Because the *Nina* and the *Pinta* could not accommodate the entire retinue on the long journey back to Spain, Columbus was forced to leave 39 of his crew in Guacanagari’s village. Exactly what transpired

after Columbus departed on January 4, 1493 remains unclear, but when he returned the next year all of his men were dead, and the situation had begun to deteriorate (Morrison 1942:307,424).

Although Columbus himself maintained a friendly association with Guacanagari, his relations with other Taino caciques were not as cordial. Many formed alliances and took up arms against the Spanish, ushering in a five-year period of open warfare. Moreover, the (perceived) opportunity to get rich quick attracted evermore Spaniards of ignoble intentions. Their self-motivated interests clashed with Columbus' plans for the island, and The Admiral was removed in chains from Hispaniola to Spain in 1500 (Sauer 1966:103). At that time only about 300 Spanish remained on Hispaniola (Sauer 1966:106).

Francisco de Bobadilla was sent to replace Columbus. He arrived in 1500, and for two years oversaw Spanish affairs as Governor (Sauer 1966:107). Internal disputes among the Spanish diminished after Columbus' departure, as did armed Indian resistance, so that things under Bobadilla were “prosperous for the Spanish and somewhat less onerous for the natives” (Sauer 1966:106). This period of relative peace ended almost immediately in 1502 when Bobadilla's replacement, Frey Nicolas de Ovando, arrived with some 2,500 Spanish settlers. The influx of so many newcomers strained the fragile economy of the island. Moreover, many of the immigrants immediately rushed to the gold fields, which spiked demand for native labor. Indian uprisings became more commonplace, and Ovando eventually set out to pacify the island once and for all (Sauer 1966:147-148).

Although greatly outnumbered, Spanish technological superiority tilted the balance in their favor. In 1502 and 1503, Ovando either led or ordered massacres in the southeast and west of Hispaniola to decapitate the upper echelons of the Taino power structure and wipe out as much of their military as possible. The last major engagement of his effort occurred in 1504. In

this “war of Higuey,” the last paramount cacique of the island was killed, and Indian resistance all but collapsed (Sauer 1966:149-150). The island was largely pacified, but at a huge price paid mostly in Taino blood.

Ovando then worked with the remaining, lower-echelon caciques to organize Taino labor under the *encomienda* system (Sauer 1966:150). This program required native individuals to provide labor to the Spanish for four to six months at a time (Deagan 2004:602). Brutal working conditions and forced relocation into cramped quarters caused many Taino laborers to die of injury, exhaustion, or disease. The Taino population, already decimated by war, continued to decline so that “By the middle of the sixteenth century, the Taino were no longer identifiable as a social entity” (Deagan 2004:602).

Let us now return to the particular relationship between En Bas Saline and the Caicos Islands. The central thesis of Deagan’s argument is that many aspects of Taino life remained largely intact even as the population was rapidly declining. She acknowledges that “The combined effects of military defeat, near slavery, forced physical relocation, social abuses, and new diseases that confronted the Taino...created severe demographic pressure and population loss,” but questions the “widely accepted and often implicit corollary theme to the demographic collapse of the Taino is that population decline was paralleled by an equally rapid and devastating disintegration of traditional Taino social, economic, political, artistic, and ideological organization” (2004:602). Indeed, many Taino cultural institutions survived relatively intact because Spanish policies did not affect every Taino equally. Her article explores the reasons that some aspects of Taino society persisted for decades after contact while others were disrupted almost immediately. It is in this context that the Level 1 beadmaking horizon of CC-2 is best understood.

Deagan reminds us that in most cases, the Spanish respected the Taino caciques' chiefly authority (2004:601-2). This probably reflects the two cultures' high degree of social stratification, which led the Spanish leaders to view the Indian leaders more or less as equals rather than subjects. Even though Ovando murdered the highest-ranking caciques, his actions are best viewed as a military tactic designed to win a war rather than a statement about his opinion of the native social hierarchy. In fact, after the island was "pacified" the Spanish under Ovando worked closely with the surviving Taino leaders to implement the *encomienda* system (Sauer 1966:150). In return for their cooperation, these caciques enjoyed immunity: "Spanish recognition of and respect for chiefly status privileged the caciques, who were generally exempt from labor requirements and instead organized their subjects for the *encomienda* labor drafts" (Deagan 2004:608).

To fill the draft quota, the caciques conscripted laborers from among their subjects. Because the labor was physically demanding, those who were hardier (i.e. men) were more likely to be drafted than others. Thus, "the direct impact of Spanish dominion may have been experienced most keenly along class and gender lines, specifically non-elite households and men. Although Taino women often served the Spaniards in several capacities...it was for the most part non-elite men who were recruited for distant work in Spanish-owned mines, agricultural fields, and town construction" (Deagan 2004:609-10). This quickly created a situation in which male-dominated activities like hunting terrestrial animals waned (Deagan 2004:616). However, female-dominated activities like ceramic manufacture remained unchanged (Deagan 2004:611-615) because women were less likely to be relocated.

Deagan also observed a dramatic disruption in craft production at En Bas Saline in the post-contact period. She interprets the decline in "specialized artistic activities" as "consistent

with the hypothesis that men were the primary producers of ornamental craft items, and that the removal of men from the community should be reflected by a change in the material products of their work” (Deagan 2004:618). Importantly, she also noted that:

The production of beads and pendants did, in fact, continue into the post-contact period, but at a markedly reduced level. It should be noted that the highest proportion of such items at the site occurred in the post-contact burial...Possibly as a consequence of reduced production, these ornamental objects seem to have been emphasized in ritual performance rather than in household use after contact (Deagan 2004:618).

This is a classic illustration of how the economic law of supply and demand transcends culture. As Hispaniolan bead makers were hauled off to work for the Spanish, the beads they produced became increasingly scarce. As supply dwindled, the beads became imbued with additional social value, as evidenced by their increased role in “ritual performance.” High social value readily translates into high economic value, as individuals are willing to offer more to obtain items of prestige. I argue that the post-contact social and economic paradigm Deagan (2004) described is the primary reason that Lucayans from Middle Caicos re-established the beadmaking industry at CC-2.

It is well known that MC-6 and MC-32 maintained an active trade with Hispaniola for many decades prior to the arrival of the Spanish. This trade relied primarily upon exports of Bahamian salt and foodstuffs in exchange for Hispaniolan ceramics (either utilitarian or elaborate), raw materials, finished igneous and metamorphic stone tools, religious items, and possibly spouses (Sullivan 1981:426; Keegan and MacLachlan 1989:614, 623). Prior to 1492, the Lucayans’ trade with Hispaniola was lucrative. However, the economic dynamic rapidly changed shortly after the Spanish arrived. Warfare, disease, and forced servitude quickly launched the Taino population into its sad, downward spiral. As Hispaniolans disappeared by

the thousands, the demand for Bahamian salt and foodstuffs became less robust. The “entrepreneurs” at MC-6 were rapidly losing customers, and the model upon which they had long based their trade was becoming increasingly less lucrative. In short, they had to adapt to changing market conditions.

The archaeological evidence is clear that contact between the indigenous cultures continued as these events transpired. Chican pots and Hispaniolan raw materials, finished goods, and people continued to be imported in exchange for Bahamian staples. News from Hispaniola would have reached the Turks & Caicos through the same channels as did the melado ware sherd at CC-2, the European brass at MC-6, and the Old World rodents at MC-32. The Lucayans would have learned that beads were increasingly scarce and valuable in Hispaniola as the local bead makers were conscripted to work elsewhere. They would have recognized that raw material for beads was abundant in their region, and that beads are relatively easy to manufacture, simple to transport, and worth more as an export than the investment of labor required to produce and transport them. Finally, and perhaps most significantly, they would have realized that their existing model was yielding far fewer returns than it had in the recent past. Aware of the challenge, and perhaps sensing an opportunity, the residents of Middle Caicos wisely opted to diversify their economy. Trade in beads would offset declines in revenue from other, traditional sources.

**Why re-establish a beadmaking enterprise on Cotton Cay?** Logic suggests that the Lucayans of Middle Caicos made a decision to manufacture beads to augment declining returns from staple items. The reason they elected to establish this enterprise on Cotton Cay is less obvious, for as discussed above, there is no practical reason they could not have made beads in the Caicos Islands. Therefore, the decision to establish this industry across the Columbus

Passage must have been driven by other factors. I believe that the spread of Spanish dominion throughout the region played a role. I argue that the decision to relocate some of the men from Middle Caicos to the “hinterlands” of the Turks Islands was a response to the evolution of European demands for Indian labor.

Apart from the economic disruption wrought by the decimation of their Hispaniolan Taino client base, the Lucayans were relatively unaffected by the first 15 years of Spain’s depravities in the New World. Although some abductions had occurred (Sauer 1966:159), there had never been any grand effort to capture the Lucayan peoples. That changed in 1509. With a crass acknowledgement that so many Indians had died that additional labor was “needed” for his “enterprises,” King Ferdinand instructed Ovando to begin importing Indians from the “neighboring islands,” including the Bahamas (Sauer 1966:159).

By the end of that year, Puerto Plata, Puerto Real, and Concepcion on the north coast of Hispaniola were established as the primary hubs of the nascent slave trade (Sauer 1966:159). Because these ports are all less than 250 km from the Turks & Caicos, these Lucayans would logically have been among the Spaniards’ early marks. Yet in spite of their vulnerability and notwithstanding King Ferdinand’s eagerness for new labor, it is unlikely that an immediate and complete depopulation of the southern Bahamas occurred. No more than a few thousand Spaniards lived in the New World, and most of them were engaged in other activities. Simply put, the Spanish did not have the manpower to execute a large-scale slaving operation. It is more likely that the early slave raids were simple affairs, perhaps involving a single ship and crew. Evidence from the Molasses reef wreck on the southwestern Caicos Bank corroborates this notion. The ship, which went down no later than 1513, was heavily armed and provisioned to be entirely self-sufficient. Many items of intrinsic value to the slavers were recovered from the

wreck, including 2 breech-loading bombardetta cannons and 15 smaller swivel guns (Turks & Caicos National Museum 2009). Because these arms could only be obtained from Spain and were not easily replaced, their presence among the wreckage strongly suggests that the ship sailed alone. If she had a consort, then these valuable items would have been transferred to the healthy ship, or salvaged from the shallow waters by free-diving survivors shortly thereafter.

If true, then the small-scale nature of the early Spanish slave raids has three important implications that are relevant to the interpretation of CC-2. First, it means that indigenous contact between the Caicos Islands and Hispaniola did not come to an abrupt end, but continued for a time with increasing modifications. The Spanish artifacts at CC-2 and MC-6 and the rat bones at MC-32 are clear evidence that trade and social relations remained in force well after contact, even though new objects were passing through those channels in addition to the conventional merchandise. Second, there is no reason to suspect that the de facto expansion of the *encomienda* system into the Turks & Caicos would have transpired along anything but the same social and gender lines that Deagan observed at En Bas Saline. Indeed, the Spanish would have sought to maximize the value of their ventures northward by seeking those Lucayans best suited to work in the particular economy of Hispaniola. Thus, non-elite men who could work the gold mines and fields would have been more in demand than other demographic groups. Finally, if men were the primary targets, but only relatively few men were abducted in any particular slaving raid, then the Lucayans would have had time to formulate a strategy to adapt and resist the Spanish by “hiding” the men at the first news of Spanish in the area. Part of this strategy of resistance could have been to relocate men away from the widely-known and impossible to conceal Caicos Island population centers into more peripheral areas. If so, then the Turks Islands would have been an excellent place to hide. As discussed earlier in this chapter, the

archaeological record indicates that few settlements existed in the Turks Islands after about AD 1280. These islands simply would not have been on the radar screen of anyone in Hispaniola—either Indian or Spanish—and could have served as a refuge from the slave raids of the early 16<sup>th</sup> century. During these periods of self-imposed exile, men could engage in what would still have been a lucrative economic enterprise: manufacturing beads for export to the remaining Taino settlements scattered about Hispaniola.

The CC-2 operation was likely active early in the 16<sup>th</sup> century. Over this period, Sauer observed that “the price per [Lucayan] head went up from 5 to 150 gold pesos” (1966:160). The initially low price commanded by imported Lucayan slaves suggests that local Hispaniolan labor was still available and the Indians had certainly not disappeared. Thus, there was still a market for imported beads during the early phases of the Lucayan slave trade, and it could have been supplied by men from the Caicos settlements that went into hiding to avoid the slave ships. As time passed, Indians working the Spanish mines and fields continued to die. As the Hispaniolan labor pool shrank, prices for new slaves naturally rose. Moreover, Lucayans were prized for their diving ability, and commanded an additional premium for employ as pearl divers on the coast of Venezuela (Keegan 1992:221). This would motivate the Spanish slavers to increase their slaving efforts in search of greater and greater profits. As pressure upon the Lucayan populations increased, fewer and fewer Caicos men would have been available to make the beads. Concomitantly, demand waned as the indigenous populations of Hispaniola gradually disappeared. Even if some Lucayans survived beyond the early 16<sup>th</sup> century, as the radiocarbon data from Gibbs Cay suggests, it is unlikely that any beads were exported after perhaps 1520. There just was no market. By then the centuries-old tradition of exporting beads to Hispaniola had run its course.

**Concluding thoughts on CC-2.** Because the sample size of the material assemblage at CC-2 is small, the scenario I describe relies heavily on theory and inference. Still, I believe that my hypothesis best explains the unusual data recovered from the Level 1 horizon of CC-2. It also offers an interesting window into what life was like for the Lucayans at this seminal juncture in history, which is a concept that has never been thoroughly examined. Exploring this idea further would require a re-examination of the material recovered from MC-6 and MC-32. Specifically, it would be helpful to learn how the relationship between Hispaniola and the Caicos sites changed in the post-contact era. The Lucayan material assemblage should reflect an evolution in the trade relationship—driven by basic economic forces—as Hispaniolan Taino populations declined.

In the first decades of the post-contact period, demand for Bahamian salt and foodstuffs must have waned as their Hispaniolan customers died from warfare, forced servitude, and disease. Although the Spanish probably wanted these products too, they were far too few of them to make up the entire difference. As with any business enterprise, weaker demand means lower “profits.” As fewer Hispaniolan customers consumed fewer goods, the volume of exports from the Caicos Islands would have decreased. This would cause the Lucayans to either drop prices to stimulate demand and move the product, or to cut back on supply because there was no place to sell it all. Either way, they would have seen their overall purchasing power erode. This could be measured in the frequency of Hispaniolan materials they acquired in exchange, which should be eminently observable in the archaeological record.

Here, Deagan’s (2004) discussion of the relationship between gender and production at post-contact En Bas Saline tells us what to look for at MC-6 and MC-32. First, did the ratio of Palmetto ware to imports change in favor of more Palmetto ware? Even though Keegan

observed that 94% of the ceramics at MC-6 were locally made (2007:184), the chronology of the deposit is poorly understood and based upon a single uncalibrated radiocarbon date (see Keegan 2007:142). A finer-grained analysis of the ceramic assemblage within an enhanced temporal context may reveal if the Palmetto/imported ratio changed over time, and if so, how. Second, is there any change in the frequency of imported lithics in the terminal strata? Because cherts are unavailable in the carbonate Bahamas, any change in the frequency of these materials at MC-6 would enlighten our understanding of how the Lucayan/Hispaniola trade relationship evolved.

If further analysis reveals that any change occurred, such change would not have been caused by an immediate post-contact disruption in the supply of Hispaniolan materials:

During the same period, there was a high degree of continuity in the kinds and proportions of items presumed to be associated with women's activities, or to have been produced by women, including ...ceramic production. There is the possible implication as well—at least in the case of lithic production...—that women may have assumed some of the most critical subsistence and production tasks thought to have been traditionally performed by men" (Deagan 2004:621).

As such, any shifts in the composition of the ceramic or lithic assemblages away from imported items toward locally-produced materials is probably better explained by the fact that the Lucayans' traditional business model simply did not afford them the purchasing power they had long enjoyed. As discussed at length above, the decision to re-establish a beadmaking enterprise on CC-2 could have been designed to ameliorate the deficit and preserve the Lucayans' "standard of living", albeit for a limited time. Clearly, more analysis is necessary to determine exactly how the Lucayans responded to these events. It is my hope that my thoughts here will inspire additional research into this important, yet largely unexplored facet of Lucayan history, and address Deagan's concern that "very little is known archaeologically about the Taino during this [post-contact] period" (2004:598).

## **The Archaeology of the Turks Islands**

One of the objectives of my research was to assimilate the disparate references pertaining to the prehistory of the Turks & Caicos Islands into a single document. What follows is general overview of Turks Island archaeology that broadly incorporates my work and the results of previous research into the cultural historical timetable outlined in Chapter 1.

### **Summary of Turks Bank Prehistory**

The archaeological record of the Turks Islands is composed of nine sites and three activity areas. Of the nine sites, Governor's Beach and Coralie on Grand Turk are the most substantially excavated and widely available in the literature. Next are Gibbs Cay and CC-2, which are, of course, discussed above. The remaining five sites are poorly understood and sparsely documented, including GT-1 and GT-4 on Grand Turk, CC-1 on Cotton Cay, and SC-1 and SC-2 on Salt Cay. Three activity areas have also been identified in the Turks Islands. Long Cay, Pinzon Cay, and Grand Turk have one activity area apiece.

### **Ostionan Phase: AD 700 to AD 1150**

The Turks Islands were first settled by Ostionan-affiliated peoples from eastern Hispaniola. They established the Coralie site on Grand Turk early in the 8<sup>th</sup> century AD. These first people in the Turks Islands encountered a pristine ecology that had never been subjected to human predation. Consequently, they enjoyed a rich diet high in terrestrial species like iguana and tortoise and high-ranked marine taxa like big fish and sea turtle. These resources far exceeded the available subsistence items in their native Hispaniola, so they continued to visit on a sporadic, seasonal basis for several centuries. Their predation gradually depleted the ecology by extirpating many of the terrestrial species. For this reason, or perhaps due to social changes back home, their last visit to the outpost occurred late in the 12<sup>th</sup> century AD.

### **Meillacan Phase: AD 1150 to circa AD 1300**

Shortly before Coralie was abandoned, a different group established a new site on the opposite end of Grand Turk. The Governor's Beach site was intermittently occupied by Meillacan peoples from the north-central coast of Hispaniola. The Governor's Beach outpost was a purely commercial enterprise, established for the express purpose of manufacturing shell beads for export back to their homeland. Thousands of completed beads and bead blanks were recovered from the site. Governor's Beach was abandoned suddenly, as if by force. Because more than 400 completed beads were found burned in a fire, it seems as if the Governor's Beach residents lost the battle. Some researchers argue that the Coralie residents destroyed Governor's Beach, but I argue that belligerents from the Caicos Islands were responsible.

Meillacan-affiliated peoples never returned to Governor's Beach, but they may have established a footing on Grand Turk at GT-4. GT-4 is situated on the northwestern coast of the island, which places it quite near the Coralie site. This fact suggests that it was occupied after Coralie was abandoned in the late 12<sup>th</sup> century, for it is difficult to imagine two completely culturally distinct groups coexisting within sight of each other. In any event, GT-4 has never been excavated, and the site is heavily disturbed by residential construction. Surface reconnaissance suggests that it is similar to Governor's Beach, but absent more data, it is not possible to establish a definitive affiliation.

A clearer relationship can be inferred between Governor's Beach and the Gibbs Cay outpost. Gibbs Cay was occupied in the mid 13<sup>th</sup> century—at the same time as Governor's Beach. Moreover, the ceramics at Gibbs Cay are Meillacan, and other aspects of the material assemblages are comparable. Gibbs Cay was also an intermittently-occupied beadmaking venture, though the quantity of beads we recovered at Gibbs did not nearly approach the scale of

the assemblage at Governor's Beach. Although Gibbs Cay and Governor's Beach are similar, both temporally and materially, the exact sequence of this relationship remains unclear. Gibbs Cay could have been one of several locations settled by the Hispaniolans—perhaps they alternated their periodic visits between Governor's Beach, Gibbs Cay, and/or GT-4. It is also possible that Gibbs Cay, with its high redoubt and defensible terrain, was chosen as a protective measure after their rout at Governor's Beach. In any event, the sites are contemporaries, and both appear to have been actively engaged in the same enterprise around the same time.

After Meillacan peoples abandoned Gibbs Cay around the turn of the 14<sup>th</sup> century, there was no further settlement on or around Grand Turk. Some isolated Palmetto ware sherds at the Waterloo site on the west coast just south of Governor's Beach indicate that later peoples may have visited the island, but the lack of any subsurface deposits suggests that the occupation was fleeting (Keegan et al. 1994:7-8). Grand Turk seems to have been largely ignored from perhaps AD 1280 until the Bermudan salt barons set up shop in the 17<sup>th</sup> century.

Evidence from the western Cotton Cay site CC-1 suggests that it was occupied during this period because the ceramic assemblage is dominated by imported wares, which are probably Meillacan. If so, then the site could be contemporaneous with Governor's Beach, Gibbs Cay, and perhaps GT-4. If so, then CC-1 may have been in the “rotation” with these sites as Meillacan-affiliated groups from Hispaniola journeyed to the Turks Islands to manufacture beads for export. Absent any excavated data, however, this hypothesis remains untested.

### **Lucayan Phase: circa AD 1300 to AD 1520 (1620?)**

CC-2 was occupied during the Lucayan phase, and after Spanish contact. Excavations revealed two distinct occupation horizons. The earlier Level 2 horizon included substantial amounts of faunal material, especially fish bone, and an exclusively Palmetto ware ceramic

assemblage. The data suggest a longer period of more intensive occupation than is typically observed at Turks Island sites. There is no indication that the people who lived at CC-2 during this period had regular contact with Hispaniola, which raises the possibility that they hailed from elsewhere in the Bahama archipelago, and were drawn to Cotton Cay by local resources and the lack of competition. The later Level 1 horizon was occupied in late prehistory and well into the post-contact era. In this horizon, imported ceramics are found in context with Palmetto ware and the remains of a dedicated beadmaking industry. I argue that the Level 1 horizon was settled by Caicos-based residents of MC-6 and/or MC-32 who sought refuge on Cotton Cay to escape Spanish slave raids and offset their flagging staple trade with Hispaniola by manufacturing beads for export.

Salt Cay also appears to have been occupied during the Lucayan phase. Keegan et al. identified two sites on the north coast of Salt Cay:

The first site, SC-1, is about 300 meters from Casuarina Cottages. It measures about 40 m by 20 m. There is a light scatter of the usual mollusk shells, firecracked limestone, and a small amount of pottery. Four sherds were collected, three of which were decorated. An olive shell pendant was also collected. The second site, SC-2, is located to the east of SC-1 on the same ridge line and could possibly be part of the same site. SC-2 is also 40 m wide by as much as 400 m long. Again, the usual species of mollusk shell, firecracked limestone, and Palmetto ware and import sherds were observed. A small test unit recovered charcoal 60 cm below surface in a dark anthrosol (1994:11).

We visited the Salt Cay sites on June 11, 2004 and found that SC-1 appeared exactly as Keegan et al. describe. Yet we did not see anything remotely resembling his description of SC-2. Rather, we observed that the area immediately east of SC-1 was devoid of cultural material. Perhaps 50 meters beyond the eastern limit of SC-1, we encountered another small surface scatter of fire-cracked limestone and mollusk shell, but no ceramics. This scatter also terminated

as we moved further east. At that point we stopped looking, thinking we had identified both SC-1 and SC-2. In sum, we did not observe a site some “400 m long,” but two small and rather unremarkable surface scatters on a soil that was not appreciably darker than the surrounding beach sand.

Initially I viewed the “400 m long” figure with no small measure of incredulity. After further reflection, I now realize that such a figure is not unreasonable because the cultural material could have been deposited in stages. If so, Keegan et al. are right and SC-1 and SC-2 are probably part of the same “site.” These intermittent scatters of limited cultural material most likely reflect a series of periodic outposts established along this same stretch of beach over a prolonged period of time. In aggregate, these outposts could leave a footprint that is hundreds of meters long, even if it was deposited only 20 meters at a time over a period of decades or centuries. MC-8/MC-10 on Middle Caicos seem to fit this model, as does PC-1 on Pine Cay in the Caicos Islands and the Clifton site on New Providence in the Bahamas (Vernon 2008).

Because we did not excavate the sites, the question of when Salt Cay was occupied and by whom remains open. The presence of decorated imported sherds suggests that the residents had some ties to Hispaniola, but there is not enough specific information to determine what style of pottery Keegan observed in 1993. Moreover, my team and I identified both Palmetto ware and plain imported sherds in the light surface scatter at both sites, but none was diagnostic. Still, some inferences are possible. A mixed import/Palmetto assemblage is most commonly found at sites that postdate AD 1300, when Palmetto ware was ubiquitous in the Bahamas and Chican ceramics became common in northern Hispaniola. Therefore, it is possible that the Salt Cay sites were occupied at the same time as the Level 1 horizon of Cotton Cay. If so, then the sites could

have been outposts of the major Caicos Islands sites, and may have been similarly engaged in beadmaking. Again, more testing would be necessary to evaluate this hypothesis.

### **Activity Areas**

Activity areas have no diagnostic material or distinct cultural affiliation. Although it is not possible to place them in any of the phases described above, I include them here so my review of Turks Islands archaeology is as thorough as possible.

Activity areas were identified on two of the outlying cays. Long Cay and Pinzon Cay are southeast of Grand Turk and are two of the larger uninhabited cays on the Turks Bank. True “sites” do not appear to have been established on these islands, although wave action could have destroyed whatever evidence indigenous peoples left behind. All that remains on Long Cay is a small conch pile situated adjacent to the lone beach on the island’s lee shore. We did not discover any cultural material at this “Somewhere” activity area, but Brian Riggs, who told me about the find, identified a single Palmetto sherd among the conchs during an earlier survey (Keegan et al. 1994:9). The activity area on Pinzon Cay included some punched conch and a ground limestone pestle. These items may not be prehistoric, but they were recovered in a context that is theoretically associated with indigenous activity. The third and final activity area in the Turks Islands is on the windward shore of Grand Turk, north of Eve’s Hill near Masterson’s Point. In 1989 Keegan et al. identified a small pile of punched conch on the beach. A shovel test dug near the top of the adjacent ridge yielded no cultural material. It is possible that indigenous people deposited these shells, but the conch could also be from the historic period (Keegan et al. 1990:10).

## Conclusion

It is important to note that all of the sites in the Turks Islands fit within the “outpost” category of my classification scheme. The lack of any large-scale, permanently or semi-permanently occupied sites in these islands suggests that the Turks Islands were always peripheral to the main social and economic dynamic of the region. This fact transcends cultural affiliation and time. Over the course of more than seven centuries, Ostionan-, Meillacan-, and Chican/Palmetto-affiliated peoples all used the Turks Islands for more or less the same purpose: short-term, seasonally-based exploitation of specific, locally available resources. This is not to say that the Turks Bank was unimportant to indigenous peoples. Rather, it was simply less critical to the overall settlement strategies than other parts of the southern Bahamas, such as the Caicos Islands.

Why is this so? The answer lies in the morphology of the Turks Bank and the ecology of the islands themselves. As discussed in Chapter 3, the Turks Bank is small and most of its seas are rough. Reefs and reliably calm fishing areas are patchy and widely dispersed, which dramatically curtails not only the availability but also the accessibility and predictability of marine-based food resources. The islands themselves are also extremely dry. Even if evaporation rates were lower when the pre-colonial ecologies of the islands included more vegetation, the trade wind-driven rainfall patterns would still have limited precipitation to the scant levels observed today. Fresh water would be quickly exhausted during the dry season, and this resource would have taken time to recharge. In sum, the Turks Islands are simply too risky for permanent habitation, particularly when far better alternatives lay only 50 km to the west. In this regard, the old tourist axiom rings true: “It’s a nice place to visit, but I wouldn’t want to live there.” Thus the recurring pattern of short visits by multiple cultures for nearly a thousand years.

Another interesting aspect of the Turks Island archaeological record is that small islands always played a major role in indigenous settlement patterns. Of the nine sites in the Turks Islands, only 4 are located on the largest island (Grand Turk) and one of these—Waterloo—may be nothing more than an isolated Palmetto ware pot drop. The five remaining sites are all located on smaller islands, including Salt Cay (674.42 hectares), Cotton Cay (112.52 hectares) and Gibbs Cay (5.87 hectares) (Department of Environmental Planning and Statistics 2008b). This is particularly remarkable given morphology of the bank, the overall dryness of the islands and circumscribed nature of the marine resources. As such, the logistical challenges presented by living on resource-deficient small cays on the Turks Islands would have been even more substantial than those faced by residents of small cays in the comparatively wet and lush Caicos Islands. Yet even in the Turks Islands, the benefits outweighed the costs. This suggests that if people can survive—even for a short time—on small cays in the Turks Islands, then it would have been comparatively easier to settle these environments in more salubrious parts of the Bahama archipelago. In sum, the presence of small cay sites in the Turks Islands presents a strong theoretical argument that small cay environments were always an important aspect of indigenous settlement strategies across time and space.

Table 4-1. The Gibbs Cay Ceramic Assemblage

PLAIN SHERDS	Body Ct.	Weight	Rim Ct.	Weight	Total Ct.	Total Wt.
Small (<2cm)	5	10	0	0	5	10
Medium (2-4 cm)	6	40	2	18	8	58
Large (>4cm)	3	73	0	0	3	73
Palmetto Ware	2	7	0	0	2	7
<b>GRIDDLE SHERDS</b>						
	Body Ct.	Weight	Rim Ct.	Weight	Total Ct.	Total Wt.
Plain	0	0	0	0	0	0
Decorated	0	0	0	0	0	0
Palmetto Ware	0	0	0	0	0	0
<b>DECORATED SHERDS</b>						
	Body Ct.	Weight	Rim Ct.	Weight	Total Ct.	Total Wt.
Small (<2cm)	0	0	0	0	0	0
Medium (2-4 cm)	0	0	0	0	0	0
Large (>4cm)	0	0	0	0	0	0
Palmetto Ware	0	0	0	0	0	0
					18	148

Table 4-2 Gibbs Cay Unit Elevations (in cm below datum)

Unit		NW	SW	SE	NE	C	Average Depth (in cm below surface)
A	Begin	26	26	15	13	20	
	End	57	63	62	59	63	
	Depth	31	37	47	46	43	41
B	Begin	20	25	5	6	10	
	End	49	54	44	44	49	
	Depth	29	29	39	38	39	35
C	Begin	21	15	13	7	16	
	End	53	50	50	48	51	
	Depth	32	35	37	41	35	36
D	Begin	20	21	13	12	20	
	End	58	59	55	58	58	
	Depth	38	38	42	46	38	40
E	Begin	29	28	11	17	22	
	End	62	61	61	61	61	
	Depth	33	33	50	44	39	40

Table 4-3 Gibbs Cay Marine Invertebrate Remains

Large Mollusks						MNI
	< 10 cm	10-20 cm	> 20 cm	UID	Pieces (l)	
<i>Strombus gigas</i>	5 Pick	15 Gouge	2 Adze	3 Scraper	0.2 Hammer	25
<i>Strombus gigas</i> (tools)	2	0	0	0	1	3
Total <i>Strombus gigas</i>						28
<i>Cittarium pica</i>	< 4 cm 40	4-7 cm 58	> 7 cm 27	UID 1	0	126
Other Mollusks						MNI
<i>Nerita</i> sp.						2
<i>Oliva</i> sp.						1
<i>Chama sarda</i>						4
<i>Cymatium</i> sp.						1
<i>Cypraea zebra</i>						1
<i>Cymatium nicobaicum</i>						1
<i>Littorina</i> sp.						4
<i>Natica</i> sp.						1
Chitons						MNI
<i>Acanthopleura granulata</i>						1
Corals						Mass (g)
<i>Acropora cervicornus</i>						67
<i>Solenastria</i> sp.						15
<i>Diploria</i> sp.						1

Table 4-4 Radiocarbon dates from the Governor's Beach site. From Carlson (1999:144).

Designation	Material	Age - B.P.	Calibrated Intercept Age	Calibrated Age Range (2 sigma)
Beta 42983	Charcoal	830 +/- 80	AD 1215	AD 1004-1280
Beta 42985	Charcoal	820 +/- 50	AD 1219	AD 1041-1280
Beta 42984	Shell	1170 +/- 60	AD 1252	AD 1120-1330
Beta 42986	Shell	1080 +/- 50	AD 1307	AD 1250-1410
Beta 61150	Charcoal	910 +/- 60	AD 1070-1154	AD 1000-1260

Table 4-5. The CC-02 Ceramic Assemblage

PLAIN SHERDS	Body Ct.	Weight	Rim Ct.	Weight	Total Ct.	Total Wt.
Small (<2cm)	1	1	0	0	1	1
Medium (2-4 cm)	1	3	0	0	1	3
Large (>4cm)	0	0	0	0	0	0
Palmetto Ware	21	69	0	0	21	69
<b>GRIDDLE</b>						
SHERDS	Body Ct.	Weight	Rim Ct.	Weight	Total Ct.	Total Wt.
Plain	0	0	0	0	0	0
Decorated	0	0	0	0	0	0
Palmetto Ware	0	0	0	0	0	0
<b>DECORATED</b>						
SHERDS	Body Ct.	Weight	Rim Ct.	Weight	Total Ct.	Total Wt.
Small (<2cm)	0	0	0	0	0	0
Medium (2-4 cm)	0	0	0	0	0	0
Large (>4cm)	0	0	0	0	0	0
Palmetto Ware	0	0	0	0	0	0
					23	73

Table 4-6 CC-02 Depth of Deposit by Unit

Unit	Ending Depth (in cm below surface)	Number of 20 cm Levels
1	12	1
2	26	2
3	32	2
4	28	2
5	28	2
6	35	2
7	37	2
8	19	1
9	5	1

Table 4-7 Cotton Cay Marine Invertebrate Remains

Large Mollusks						MNI
	< 10 cm	10-20 cm	> 20 cm	UID	Pieces (l)	
<i>Strombus gigas</i>	0	8	1	4	0.0	13
	Pick	Gouge	Adze	Scraper	Hammer	
<i>Strombus gigas</i> (tools)	2	0	0	0	2	4
Total <i>Strombus gigas</i>						17
<i>Cittarium pica</i>	< 4 cm	4-7 cm	> 7 cm	UID		
	3	6	1	1	0	11
Other Mollusks						MNI
<i>Oliva</i> sp.						1
<i>Chama sarda</i>						1
Corals						Mass (g)
<i>Acropora cervicornus</i> (raw)	Abrader					295
<i>Acropora cervicornus</i> (tool)	1					4
<i>Acropora palmatta</i>						6
<i>Solenastria</i> sp.						8
<i>Diploria</i> sp.						110



Figure 4-1. Satellite image of Gibbs Cay and site GC-1. Image created in Google Earth.



Figure 4-2. The Gibbs Cay beach. Grand Turk is in the background.



Figure 4-3. North-facing view from the apex of Gibbs Cay. Note the island's consistent elevation.



Figure 4-4. Location of Gibbs Cay relative to Grand Turk. Note the mangrove forests associated with the protected waters of South Creek. Image created in Google Earth.

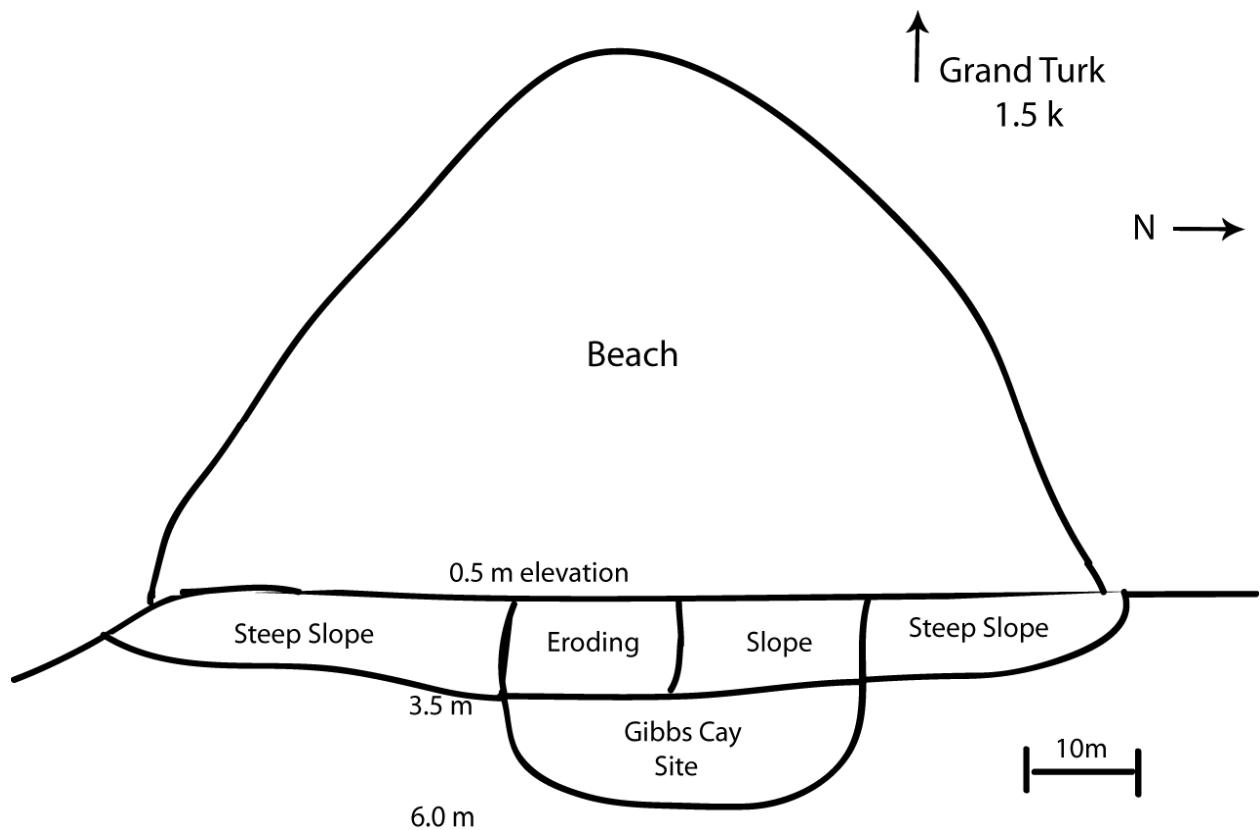


Figure 4-5. Overview map of the location of the Gibbs Cay site.



Figure 4-6. View of the site from the Gibbs Cay beach.



Figure 4-7. View of the Gibbs Cay deposit eroding out of the steep slope.

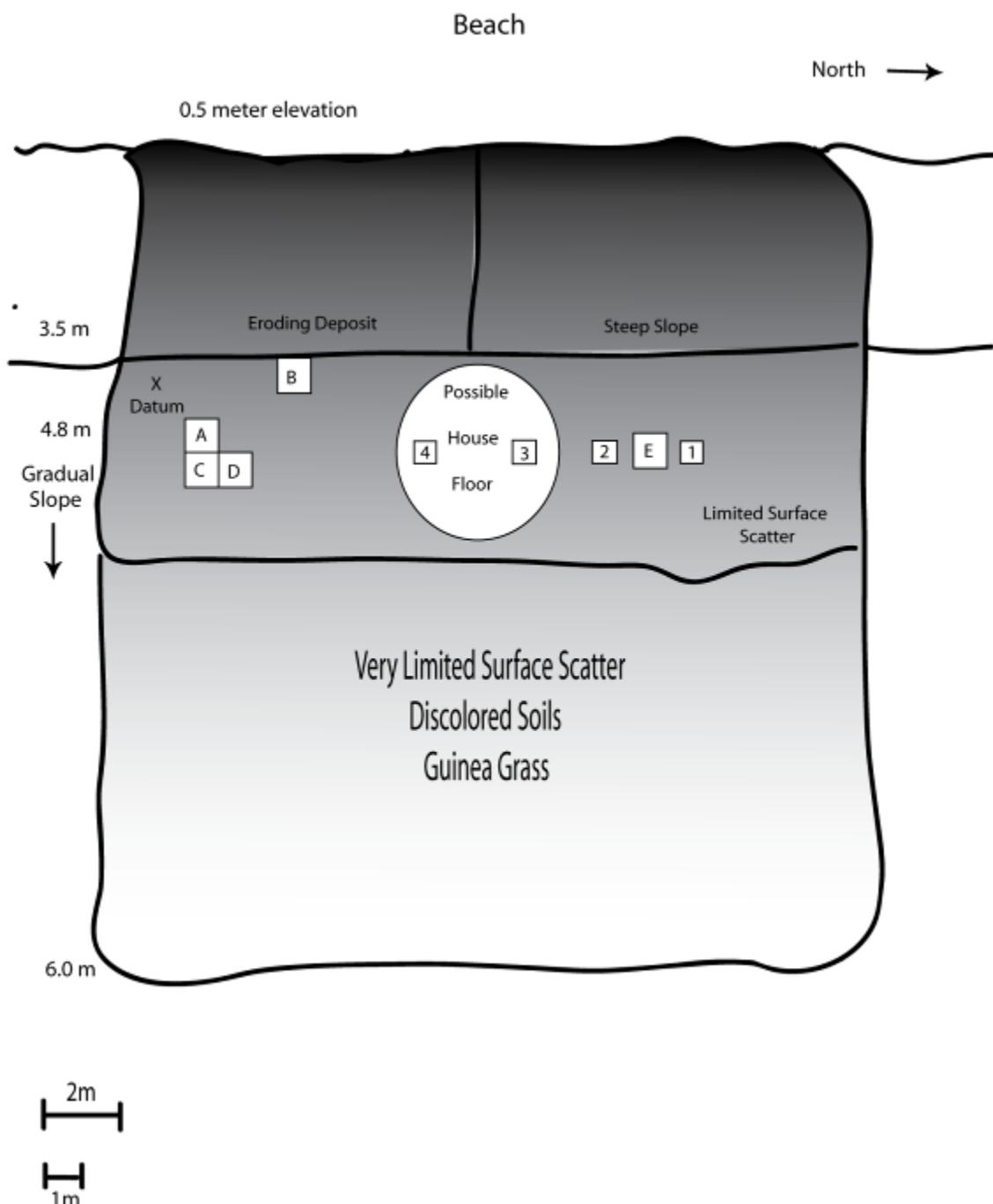


Figure 4-8. Site plan of GC-1.

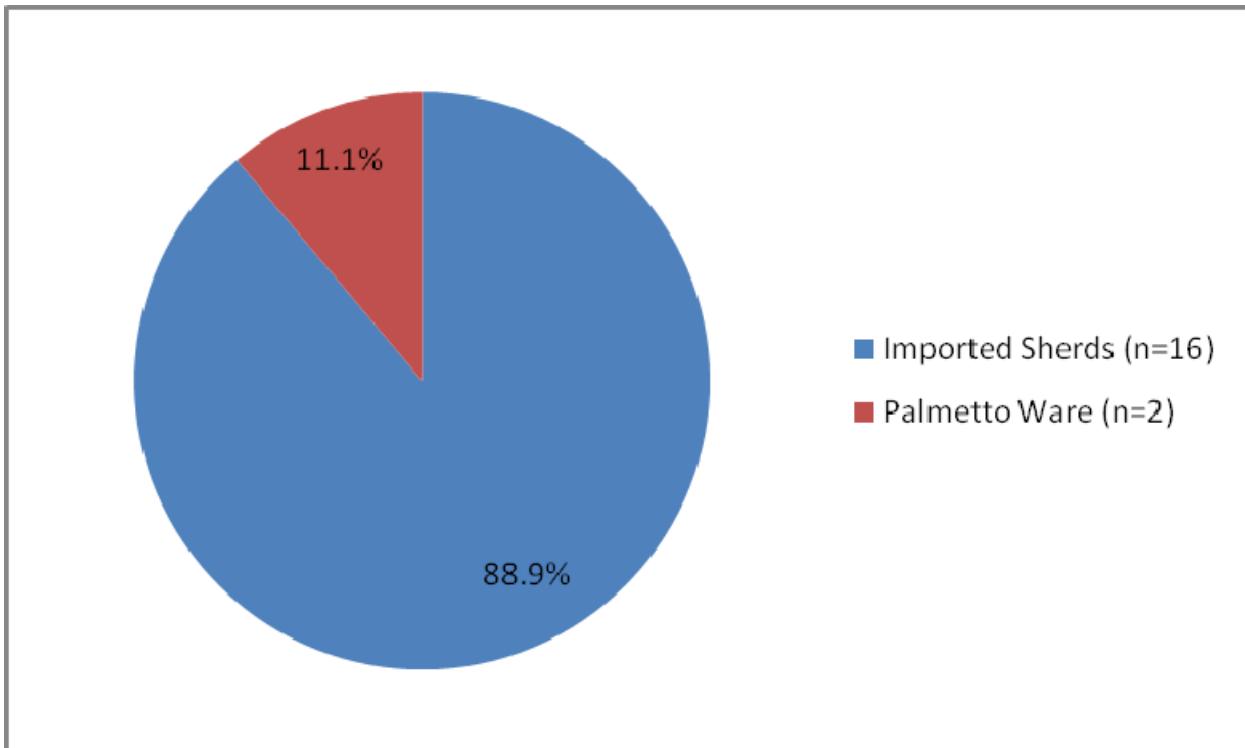


Figure 4-9. Frequency of imported and Palmetto ware ceramic sherds at Gibbs Cay.

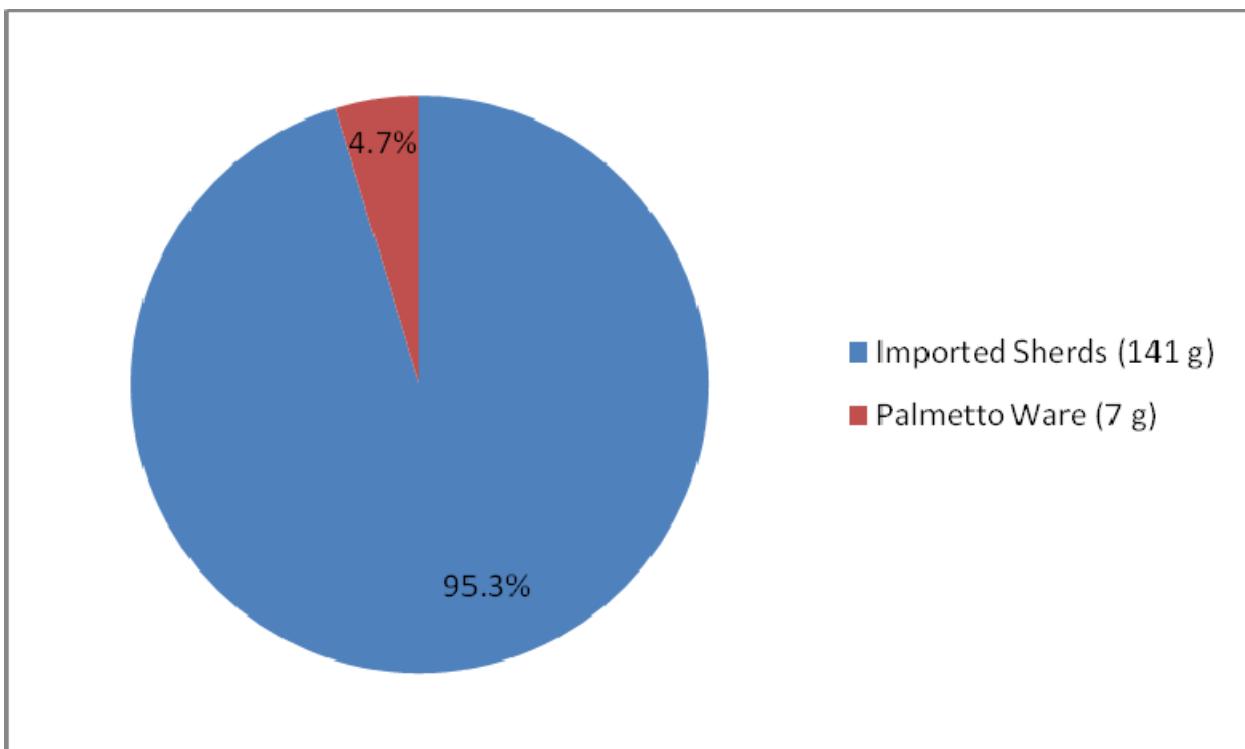


Figure 4-10. Relative weights of imported and Palmetto ware ceramics at Gibbs Cay.

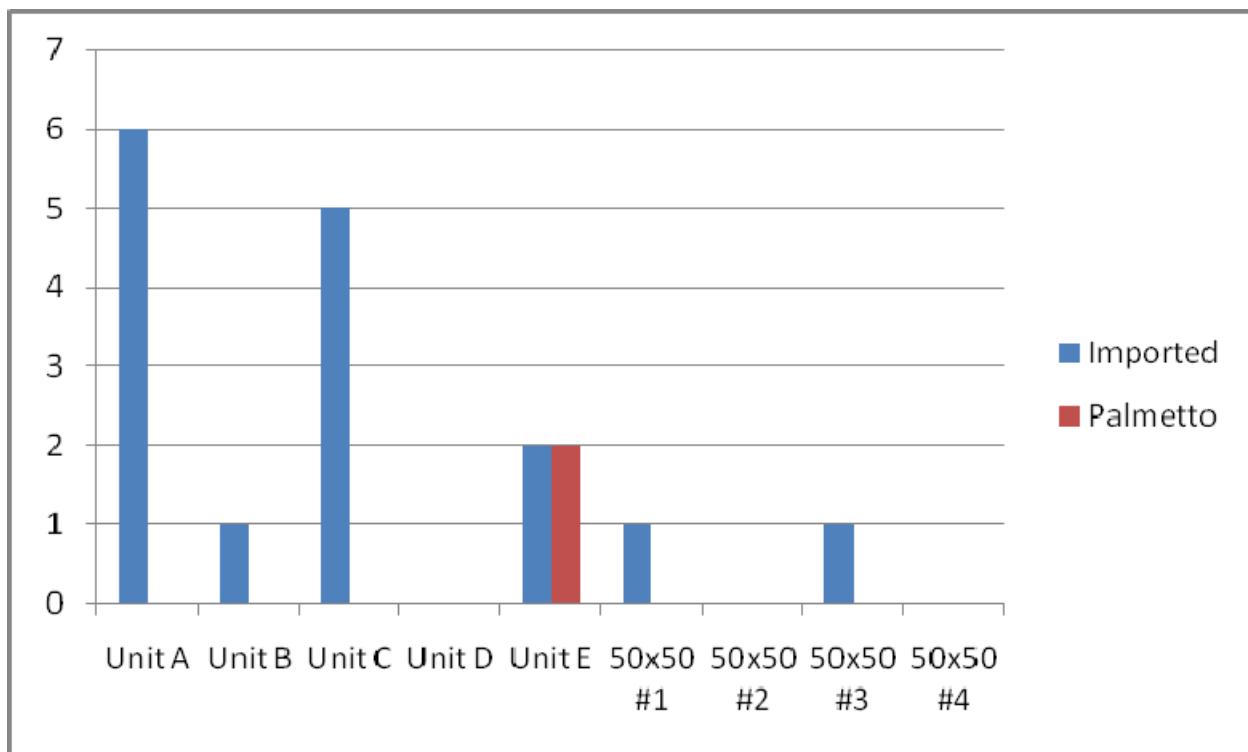


Figure 4-11. Vertical distribution of ceramics by unit at Gibbs Cay.

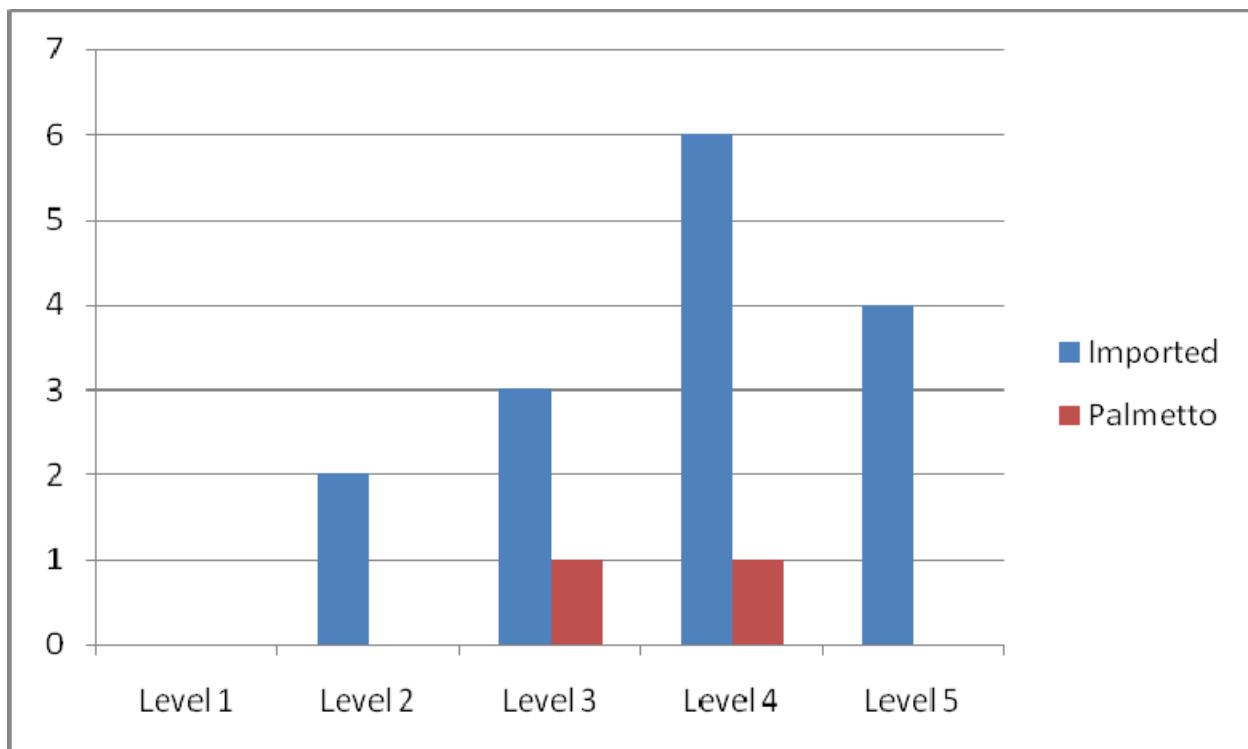


Figure 4-12. Horizontal distribution of ceramics by excavation level at Gibbs Cay.



Figure 4-13. Bead blanks from Gibbs Cay.

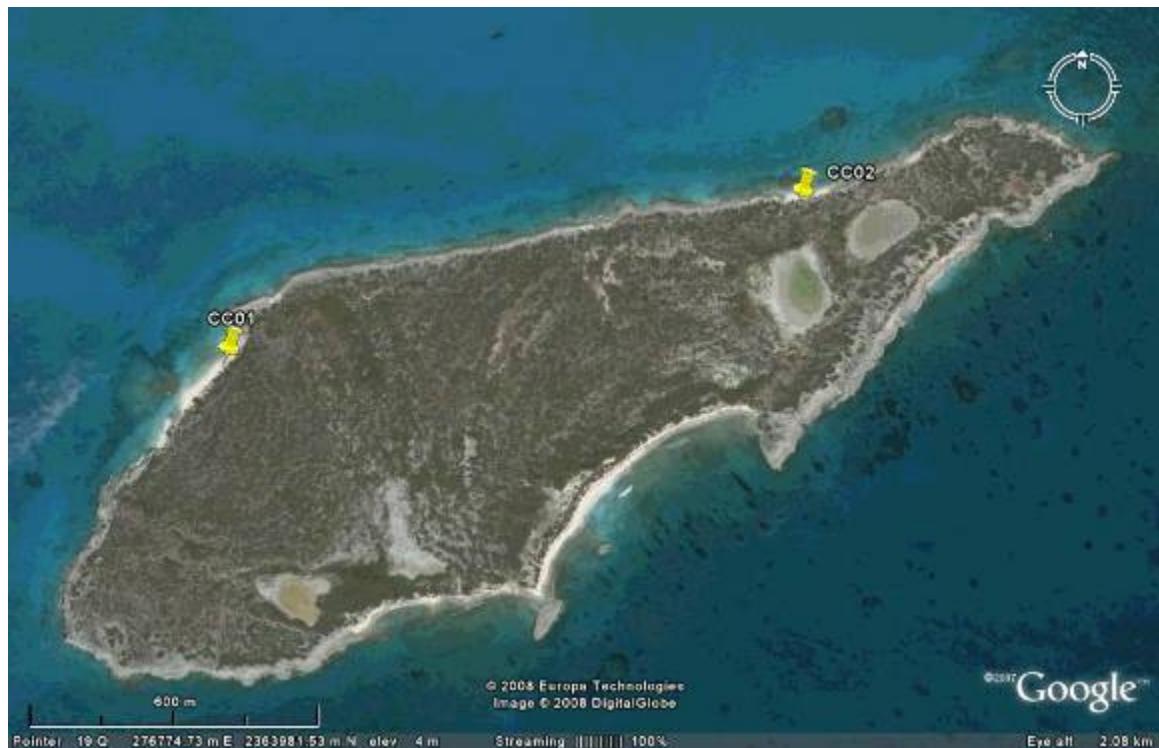


Figure 4-14. Cotton Cay and the locations of CC-1 and CC-2. Image crated in Google Earth.



Figure 4-15. The natural rock wall on the windward eastern shore of Cotton Cay.



Figure 4-16. The remains of a fiberglass skiff washed atop the eastern, windward ridge.



Figure 4-17. Salinas on the south side of CC-2. Note the abundance of sea grape.



Figure 4-18. Satellite view of the plantation era ruins on the western half of Cotton Cay. Image created in Google Earth.



Figure 4-19. CC-2 as viewed from the beach, with Meghan Beverung providing a sense of scale.

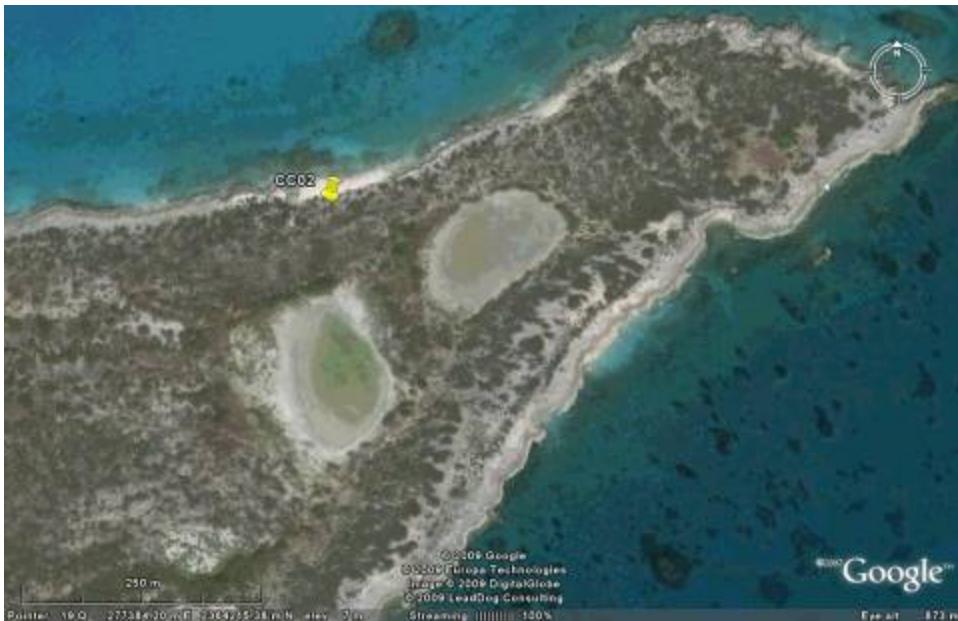


Figure 4-20. Satellite view of CC-2 and the associated salinas.

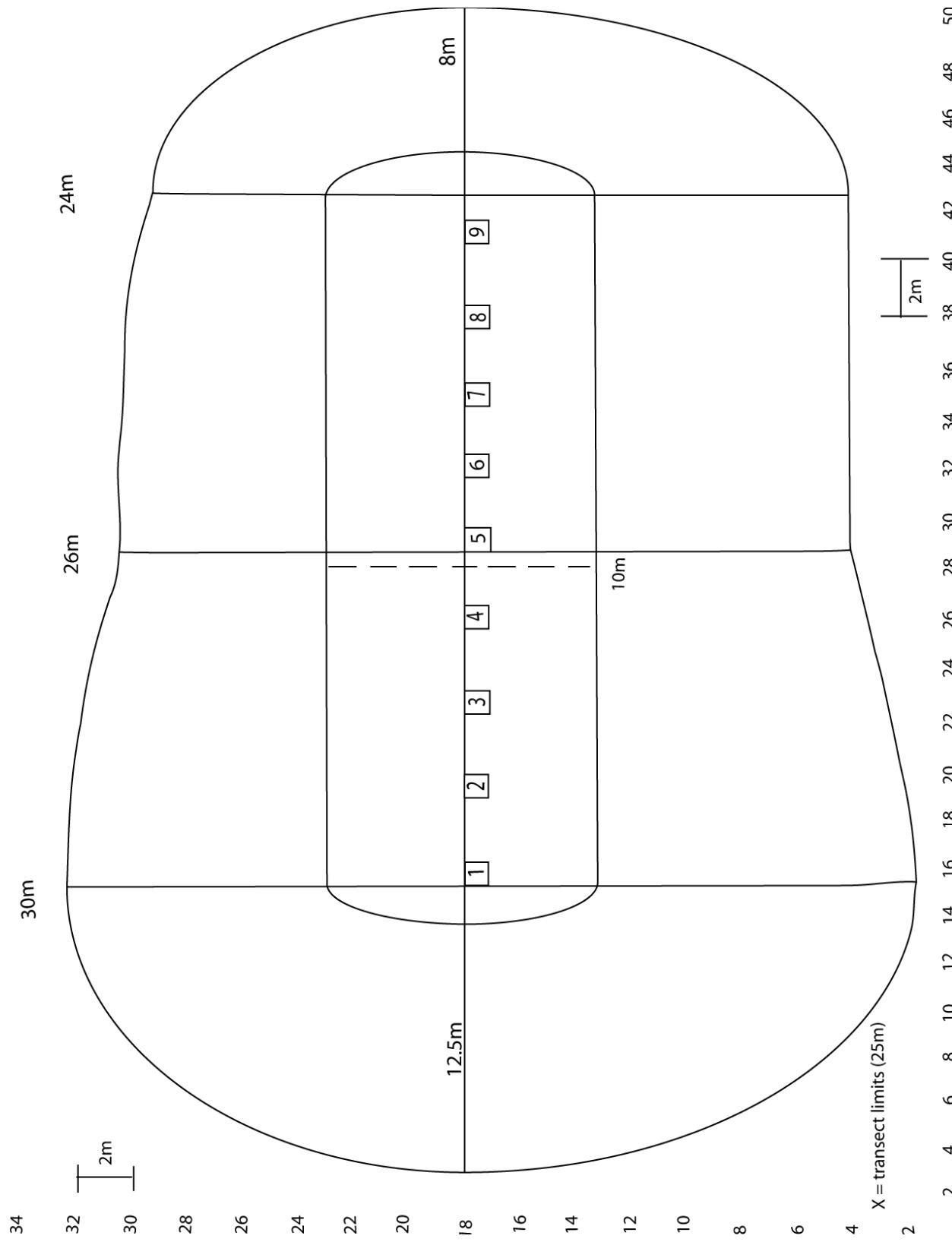


Figure 4-21. Site plan of CC-2.

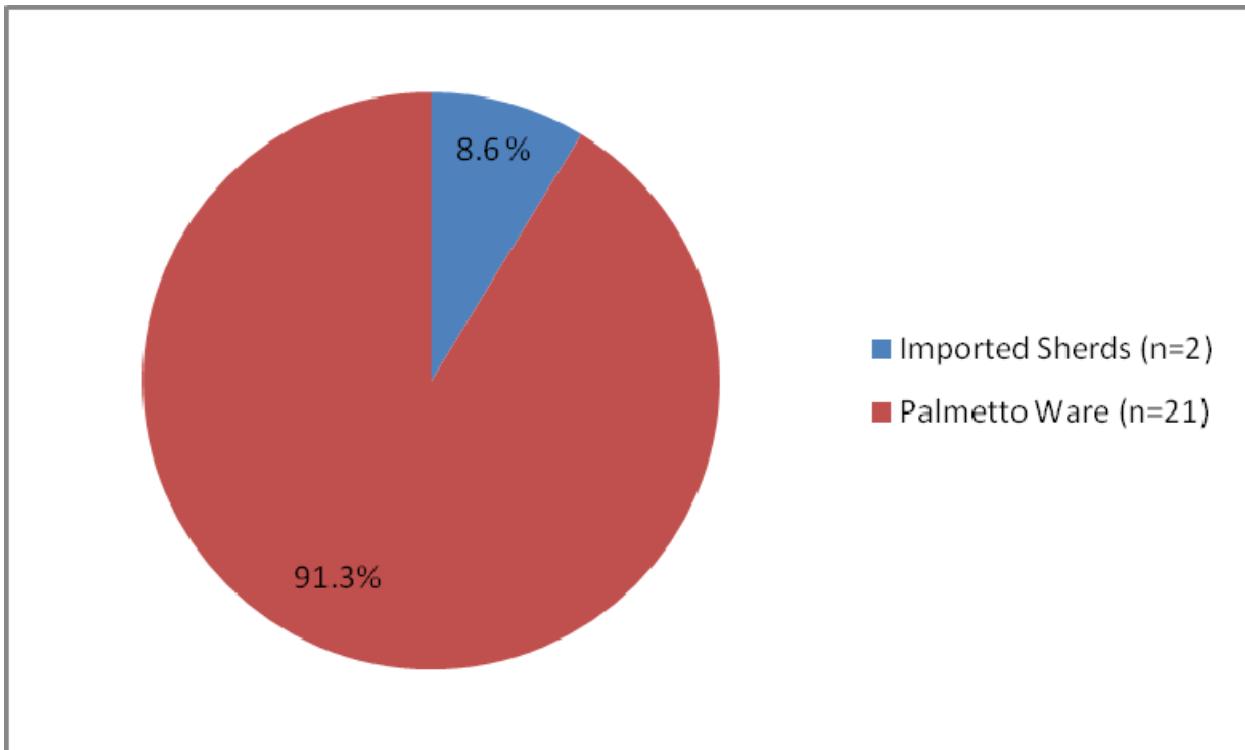


Figure 4-22. Frequency of imported and Palmetto ware ceramic sherds at CC-2.

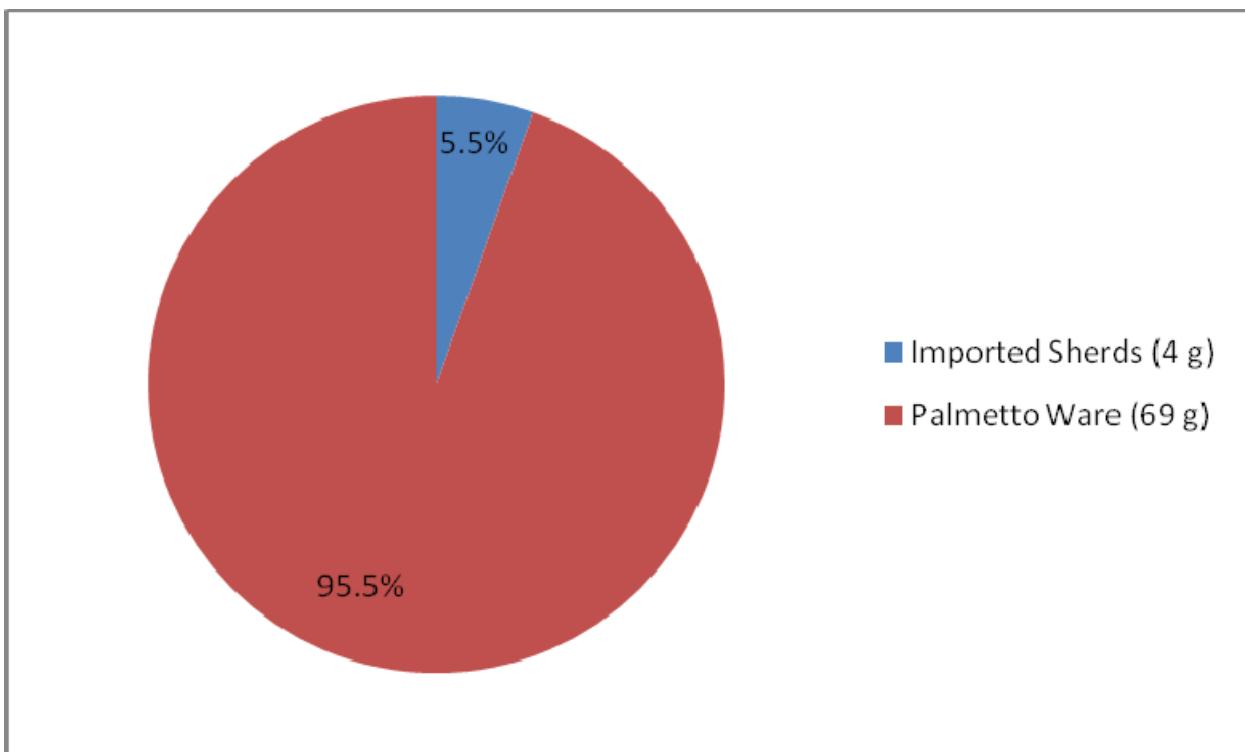


Figure 4-23. Relative weights of imported and Palmetto ware ceramics at CC-2.

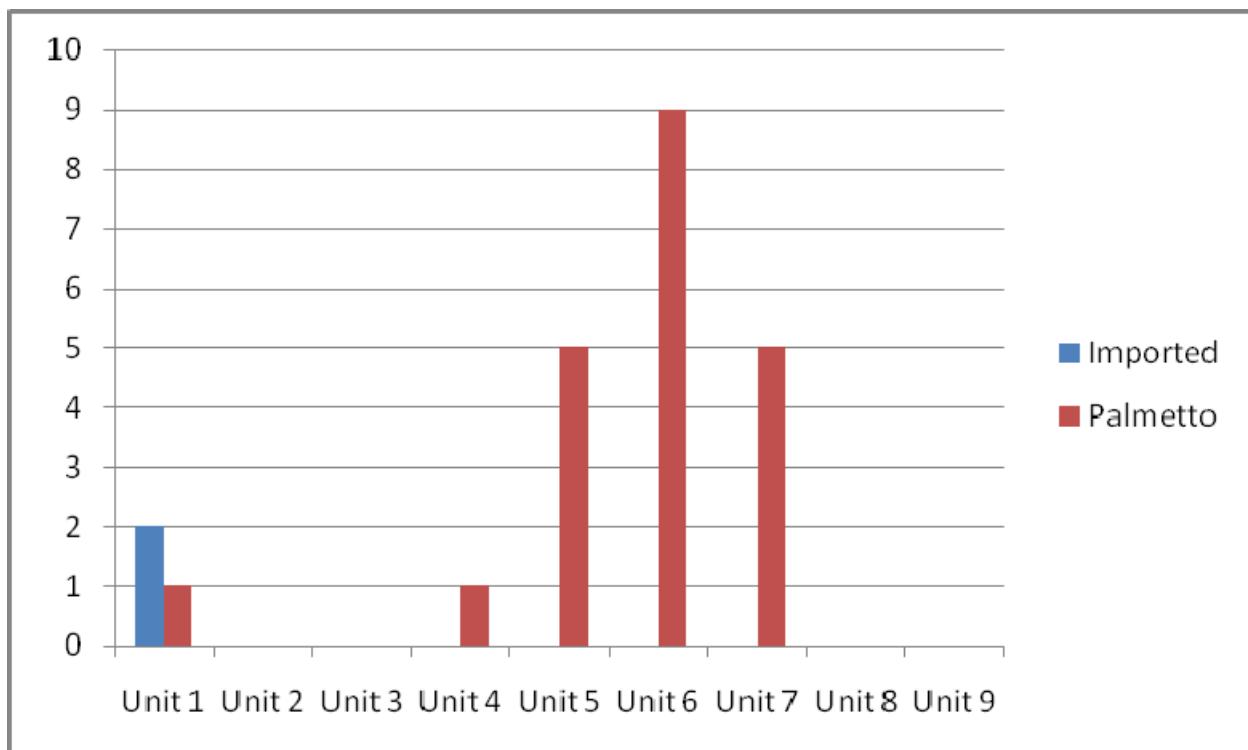


Figure 4-24. Vertical distribution of ceramics by unit at CC-2.

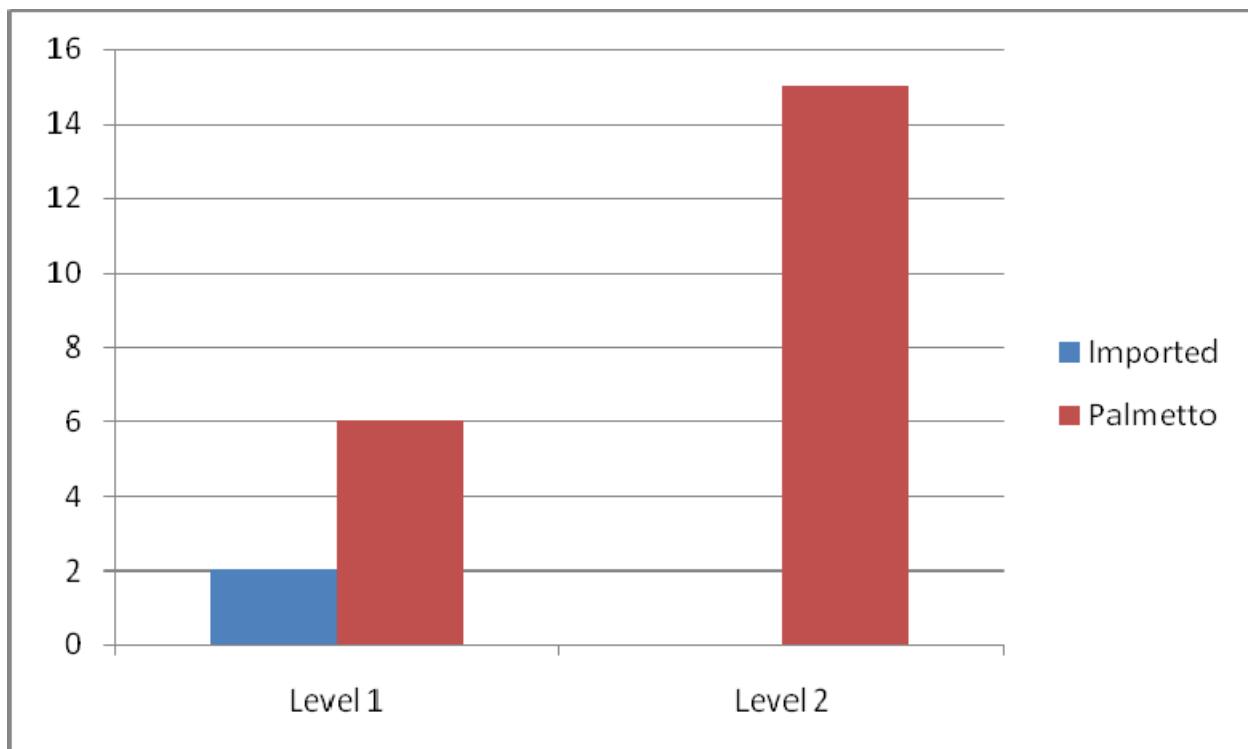


Figure 4-25. Horizontal distribution of ceramics by excavation level at CC-2.



Figure 4-26. Some of the bead blanks from Cotton Cay.

## CHAPTER 5

### ECONOMIC HUBS: THE MIDDLETON AND SPUD EXCAVATIONS

This chapter describes the excavations of the Middleton Cay and Spud sites on the Caicos Bank. I begin this chapter with an overview of the sites and how they generally fit into established models of Lucayan settlement patterns. This is to provide the reader with a contextual feel for the sites before I delve into the specifics. Next, I discuss our work and my interpretations of Middleton and Spud in detail. For each site, there is a “Data” and “Results” section. The data section includes a physical description of the cay and the site. This includes the basic details of the excavation: when it was conducted, how many units were excavated, how the site is laid out, and so forth. The results section begins with a full accounting of each site’s material assemblage and concludes with specific interpretations based on my analysis of the excavated materials and the local context in which they were recovered. I conclude the chapter by discussing how the sites integrate into the overall archaeology of the Caicos islands. These interpretations are amalgamated into a broader discussion of indigenous activity in the Turks & Caicos Islands in Chapter 7.

#### **Overview**

#### **Introduction to Middleton and Spud**

The relationship between Middleton and Spud was one of mutual economic and social dependence. Middleton Cay’s position on the Caicos Bank provided access to abundant conch resources, while Spud’s location on Long Cay afforded access to reef and pelagic fishes, terrestrial staples like iguana, and arable land for manioc production. The sites also undoubtedly maintained social alliances that ensured, among other things, access to an eligible spouse pool.

Because these sites are so closely intertwined, it is important to provide some background theory on Lucayan settlement patterns and social relations before approaching the specifics of

the excavations. This will add context to the discussion, and help the reader better comprehend the broader significance of the particular data.

### **Indigenous Settlement Patterns in the Bahama Archipelago**

Indigenous peoples did not randomly locate their major settlements in the Bahama archipelago. Keegan calculated that 90% of prehistoric sites in the Bahama archipelago occur in “settlement pairs”, which are defined as “sites that are situated within each other’s catchment areas” (Keegan 1992:83). He calculated a site’s catchment area (the area from which food and other necessities are obtained) as that space within a 1.5 km linear radius of the site, so that “paired” settlements with overlapping catchment areas would be those within a distance double that, or 3 km. However, the particular notion of what a “catchment area” means has evolved since Keegan first described the settlement pair phenomenon. Today, researchers feel that linear distance is not as suitable to define a site’s catchment area as is the time it takes to travel about it. Keegan et al. (2008) used a figure of 1 hour of one-way travel time to model a site’s catchment area boundaries. They assumed that this hour could be spent walking, or in the case of coastal settlements, traveling by canoe. Columbus reported that Lucayan canoes were so fast “that there was never a ship’s launch that could overtake [one] even if we had a big head start” (Dunn and Kelley 1989:81) and estimated their speed at 6 knots (11km/h). Keegan et al. trimmed this estimate by a fourth, to 8 km/h to be conservative. This means that any coastal site’s catchment area would include all space within an 8 km radius, assuming the Lucayans could paddle there (Keegan et al. 2008:639-640). Because “settlement pairs” are still basically defined as “sites that are situated within each other’s catchment areas” (Keegan 1992:83), this effectively expands the maximum distance between “paired” coastal sites to 16 km.

As mentioned above, Middleton and Spud are separated by a mere 3.75 km of calm, open water. This certainly places them within the 16 km parameters of the revised model of settlement pairs. Interestingly, the 16 km figure also encompasses the Meillacan-era site on Horse Cay, off the northern coast of South Caicos. Via a circuitous journey around the west end of South Caicos, Horse Cay is only 9.3 km from Middleton and 8.3 km from Spud. Thus, it is possible that these sites formed a “settlement triad” early in the sites’ histories. Moreover, virtually all of South Caicos lay within the 8 km catchment area of all three sites. The significance of these facts will be discussed in the final section of this chapter.

Now that the concept of settlement pairs has been defined, it is important to understand the reasons behind the Lucayans’ strategy. Keegan argues that sites are clustered in a manner designed to maximize resource extraction, maintain economic ties, and adhere to matrilineal/matrilocial/exogamous social norms in the face of population growth:

The shift from widespread communities to settlement pairs can be explained as resulting from population growth to a level at which lineage membership was important for defining access to productive resources. Under such conditions, males should attempt to minimize their distance from their matrilineage’s corporate usufruct...A slight spatial separation between the communities provides the basis for controlling a larger territory, while allowing men in both communities to observe the rule of exogamy and reside matrilocially without leaving their village or natal territory. Settlement pairs thus reflect social integration as an economic strategy (1992:106-107).

Let us now examine how this pattern may have played out at Middleton and Spud. The sites’ initial residents entered an environment in which food was bountiful and competition almost non-existent (Keegan et al. 2008:640). Population growth is a natural corollary to these circumstances. It would be driven by internal births as well as additional immigration as kinfolk and new spouses were brought in and word of the area’s abundant resources reached Hispaniola

via the ongoing trade relationship. As the community grew, the catchment area that once easily sustained the initial population may come under pressure due to predation and the addition of more mouths to feed. Thus it would be necessary to expand the range of foraging activities simply because the catchment is too small to accommodate everyone. A neighboring small cay would be a logical choice to establish an additional base of operations. Those who were “voted off the island,” even if it were only seasonally, could continue to execute the same general subsistence strategy. Socially, relocated individuals could practice exogamy by selecting a spouse from the sister settlement rather than relying exclusively upon the homeland for marriageable partners. This arrangement also satisfies the need to keep males near their matrilines so that the social hierarchy—which determined men’s status and entitlement to their slice of the economic pie—was not disrupted.

### **The Evolution of Social Complexity**

According to island colonization theory, we should expect to observe evidence of social complexity at Middleton and Spud. Elsewhere I have argued that any society which colonizes islands must have some degree of social stratification simply because the island colonization process requires specialized knowledge and organizational skills that are neither randomly nor equally distributed among the population (Sinelli 2006). Because this “voyaging elite” coordinate and execute all aspects of the colonization process, any colony that is appreciably distant from its homeland will, by definition, include individuals of status among the population from the onset.

The manner in which stratification evolves over time depends upon not only the nature of the individual colony but also the status of the regional colonization effort. The earliest sites in the Turks & Caicos were small-scale, temporary settlements established to exploit locally-

available resources. Because these were populated by a circumscribed demographic group (probably men) with a specific purpose in mind, they are less likely to display a great deal of archaeological evidence of social complexity. Simply put, the occupants did not intend to stay permanently so there was no need to carry all the trappings of power on what was purely a “business trip.” Still, a degree of stratification within the colonizing society as a whole is implied, and is indeed evidenced by a small number of items associated with “status” that have been recovered from many of these temporary outposts. Although someone in Hispaniola decided to establish the site, coordinated the effort, and directed the labor of others, someone had to run the operation in the field. In any event, during this initial phase of colonization most of the “status” as it was remained in Hispaniola and called the shots from there. The few status items brought to the island outposts would legitimize the authority of those in charge of the mission (i.e. the porcupinefish effigy vessel and shell trumpet recovered from the Governor’s Beach site on grand Turk), and impose a degree of order upon the population during the time they were away from the homeland.

Social stratification is manifest differently at later, larger, and more permanently occupied sites like Middleton and Spud. These sites were still part of the original economic strategy of long-distance exchange between the Turks & Caicos and Hispaniola, but the relationship between these settlements had evolved beyond the early pattern of simple resource extraction. Now, there were new players in the game. Long-distance exchange was no longer under the exclusive control of high-status individuals in Hispaniola, but mediated between these individuals and their counterparts residing on the Caicos Bank. This is not to say that the Caicos settlements became autonomous or that the influence of the emerging Caicos elite extended

beyond their immediate territory. Rather, I mean that the trade relationship was no longer skewed entirely in favor of Hispaniolan settlements, but became more of a two-way street.

Controlling access to their end of the trade relationship afforded the emerging Caicos elite a measure of power. As stewards of the local economy, they would have considerable influence to allocate resources, both domestic and imported. They would decide what to prepare for export and coordinate the labor of others to produce it. They would also control the manner in which exotic items acquired in exchange were distributed among the residents. Very likely, this control over the distribution network extended into the social realm as well. The emerging elite would certainly have had input, if not control, over who was moving between the Caicos Islands and Hispaniola, including new spouses and related kin. They would also direct the trade voyages themselves. As such, it is probable that the “voyaging elite” who established the colony are also the ones to consolidate authority as power increasingly shifted from Hispaniola toward the Caicos settlements.

The social power of the emerging Caicos elite is reflected in the archaeological record, both in terms of exotic materials recovered from the deposits and the allocation of physical space within the sites themselves. There is clear evidence of social stratification at Middleton, and to a lesser degree, at Spud. Although the sites seem to have been established almost simultaneously around AD 1160 and were contemporaneous for hundreds of years, Middleton is the larger and more complex site. It was probably permanently occupied, whereas activities at Spud may have been semi-permanent and more focused on specific tasks. This is in line with Keegan’s observation that “the communities involved are not simply equal pairs” and the emergence of settlement pairs “thus appears to reflect the emergence of a dominant lineage or lineages” (1992:107). As the reader will see, differences between the archaeological records of Middleton

and Spud do indicate that each site was home to people with different social status. Most notable is the presence of an oval-shaped, intentionally constructed plaza at Middleton that is abutted by several house floors. Although we detected a central common area at Spud, it was far less formalized. From this and other data, it seems as if the higher status lineage or lineages resided at Middleton while lower-status lineage or lineages worked at Spud.

Keegan observed that large-scale “long-distance exchange would have required the participation of a chief...whose power and influence extended beyond the community in which he resided” (1992:110). Even though he was analyzing patterns of trade at a late Lucayan settlement on Acklins Island northwest of the Turks & Caicos, I believe that the idea may be profitably applied to the case of Middleton and Spud. Only a chief could muster the labor resources of males from other lineages who resided in a different settlement to execute the trade with Hispaniola that so clearly persisted throughout the sites’ histories. Therefore, I argue that Middleton and Spud represent the earliest evidence of chieftaincy in the Turks & Caicos islands. Now I will evaluate this hypothesis in light of the excavated evidence.

### **Middleton Cay**

#### **Data**

##### **Physical description of Middleton Cay**

Middleton Cay is in the open water of the Caicos Bank 4.75 km west-southwest of the harbor at Cockburn Town, South Caicos (Figure 5-1). It is a true bank island in that there are no fringing reefs or deep water in the vicinity. The water is rarely more than 2 m deep anywhere in the immediate area, and for the most part it is possible to wade a considerable distance from the island itself. The nearest blue water habitat is more than 6 km to the east, beyond Long Cay and South Caicos. Today the island is shaped like a rough triangle with a maximum base of 350

meters, a maximum height of 250 meters, and a total area of 4.83 hectares (Department of Economic Planning and Statistics 2008b). However, relic beach rock along a 1-3 meter high ridge that bisects the island along a meandering north-south axis indicates that Middleton Cay was smaller when it was occupied by indigenous peoples (Figure 5-2). Over the intervening centuries sand and sediment has accumulated in the island's lee, so that Middleton Cay has gradually grown to the west. This area is flat and sandy, and sits no more than 50 cm above the high water mark. This feature is quite similar to the triangular-shaped beach we observed in the lee of Gibbs Cay (see Chapter 5) and was probably formed by the same processes. This hypothesis is bolstered by the fact that we observed no prehistoric cultural material in the flat area west of the relic beach.

There is evidence that the area west of the ridge is periodically inundated. We observed debris accumulated at the western base of the relic beach rock ridge that could only have been deposited by wave action. Middleton Cay is well protected by South Caicos and Long Cay from storms that approach from the east and southeast, as most tropical cyclones in this part of the Atlantic tend to do. However the lack of any appreciable land mass to the south and west of Middleton Cay makes the island quite vulnerable to tempests that approach from these directions. While such storms are rare, they do occur later in the season. From late September through the end of Hurricane season on November 30, storms are most likely to form in the warm waters of the eastern Caribbean Sea. These can be steered to the northeast and east by seasonal fronts that pass southward through the continental United States (National Hurricane Center 2009a). The most recent storms to take this track were Hurricane Paloma in November 2008 and Hurricane Michele in October and November 2001 (National Hurricane Center 2009b). Although neither tempest directly struck the Turks & Caicos, these patterns make it clear that

Middleton Cay has been as vulnerable to hurricane activity as any other island in the region in spite of its protected location on the Caicos Bank.

The Middleton Cay that the Indians knew was more oval in shape and measured 350 meters long by 110 to 140 meters wide. The island is highest in the center, where the ridge reaches a maximum elevation of about 3 meters. From the apex the landscape slopes gently downward as one moves north, east, or south. The northern, eastern, and southern areas are all relatively flat and lie a meter or so above the high water line. To the west, the ridge forms a cliff of varying steepness that is 3 meters high at its maximum. There seems to have been a prehistoric beach at the base of the cliff, abutting the ridgeline on the lee shore—the terrain slopes gently from the base of the ridge before bottoming out in the leeward flat area that has accumulated more recently. There are no salinas on the island, but a small tidal basin that may or may not have been present in prehistory abuts a tiny sandy beach on the island's northern tip. The remaining coastline is ironstone, which wraps around from the northern beach all the way to the southwestern tip of the cay.

There is a lot of evidence of historic activity on and around Middleton Cay. One of the first things one notices while approaching the island are the conch piles. They are enormous! At least 31 conch piles jut out of the island like quays at a modern port (Figure 5-2). Most of these are located on the island's southwest shore. Some are 40 meters long, 15 wide, and 2 to 3 high (Figure 5-3). Dozens of smaller piles also lie out in the shallow water (Figure 5-4)—there must be tens of millions of conch shells in all. These are monuments to both the tremendous productivity of the Caicos Bank conch fishery and the collective effort of many generations of local fishermen to exploit it. Indeed, the conch piles grow by the day. We observed fishermen shelling conch and pitching the shells onto some pile or another on several occasions during our

work on the island. Perhaps unsurprisingly, there is evidence that people have visited Middleton to harvest the conch shells as well. We observed more than a dozen old fire pits in which conch had been burned, presumably to extract the lime for historic construction on South Caicos (Figure 5-5). Fortunately this activity was concentrated in the flat area west of the ridge, so we did not encounter any disturbance to the site itself. Only a handful of the island's coastal conch piles are located on the settled part of the island, and none of these impacted the deposits.

Middleton Cay is part of the Admiral Cockburn Nature Reserve along with Long Cay and Six Hills Cays. The goal of the preserve is to facilitate "Ecosystem and biological conservation with recreation as a low-key secondary goal" (Department of Environment and Coastal Resources 2007). Consequently, the plants and animals in the preserve are protected by law. The vegetation of Middleton Cay is quite similar to that of nearby Long Cay: mangrove stands dot the lee coastlines, while mixed hardy grasses, sea grape, cactus, and other succulents find root among the rocks and shallow soils. There are no trees on Middleton Cay, but the vegetation is not as stunted as on other cays to windward. This is likely a product of the island's sheltered location. While it is typically breezy, there are no large waves so salt spray is not much of an issue. Unfortunately, we did not observe a great deal of wildlife on Middleton Cay. We encountered the occasional seabird, a handful of small lizards, and a curious barracuda during our lunchtime swims, but little else. This came as a complete surprise, for I had heard that Middleton Cay supported a thriving iguana population. Keegan described his experience there: "When Bob Gascoine took me to Middleton Cay in 1998, I found that the island was literally crawling with iguanas (*Cyclura carinata*), despite its proximity to South Caicos" (2007:161). Yet only 6 years later, we did not observe a single animal. If any were there, we would have seen them. We spent a week on the island and explored every nook and cranny of it, so it

appears that they have been wiped out. Iguanas are extremely vulnerable to extirpation. It is conceivable that some cats reached the island and decimated the population, although we did not see any or encounter any evidence of them during our work there. Nor did we observe any iguana carcasses or bones on the surface, which one would expect if the iguanas were killed and eaten on the island by feral animals. It is also possible that humans are to blame. Even though it is illegal, it would seem that people clandestinely removed them for food. Whatever the cause, Middleton Cay is largely lifeless today. Even its millions of conch are dead.

### **Description of the Middleton Cay site**

The Middleton site covers a substantial portion of the original island (Figure 5-6). There were two settlement areas on either side of the relic beach. Habitation 1 is smaller and measures 75 meters long by 30 to 60 meters wide. It is situated to the south of the relic beach in a lower area west of the central ridge. Habitation 2 is much larger and covers almost half of Middleton Cay. It measures 180 meters long and between 115 and 50 meters wide. The widest and most densely occupied portion of Habitation 2 is at the northern end of the island, bordered by the relic beach and the central ridge on the south, the sea to the west and east, and the tidal flat to the north. The southern portion of Habitation 2 tapers down to 50 meters wide as the site moves up the slope toward the apex of the ridge. The amount of cultural material on the surface also tapers off as one proceeds uphill. The apex of the ridge consists primarily of exposed limestone and rocks with little soil, which suggests that this part of the site was not habitation area *per se*, even though a light scatter of mollusks was observed. No cultural material was observed on the southern flank of the ridge, even though that area is adjacent to Habitation 1. Apparently, settlement on the south side of Middleton Cay was confined to the lower area west of the ridge.

Middleton has an enormous fossil midden adjacent to the water on the leeward coast of the site. It follows the crescent shape of the shoreline for a distance of 130 meters. The fossil midden ranges between 6 and 13 meters wide (average width = 9m) and is between 50 and 100 cm thick (Figure 5-7, Figure 5-8). Cultural material is embedded in the beach rock throughout the length of the midden (Figure 5-9 through Figure 5-13). This includes many conch shells, imported ceramics, fire-cracked limestone, and Palmetto ware. This cultural material is found throughout the entire depth of the fossil midden. Material is visible on the exposed surface as well as in the wall of the deposit where the midden terminates at the water. Some of the material at the bottom of this wall is inundated at high tide, and in many cases sits adjacent to mollusks that have affixed themselves to the surrounding matrix.

The significance of the fossil midden cannot be overstated. It offers the clearest evidence that Middleton Cay was permanently or semi-permanently occupied by a large population for a long period of time. When the site was first established, the residents piled up their refuse directly on the sandy beach. Over time as the midden grew, the lower layers became fossilized into the solid matrix that survives today. At some point, wave action washed away the upper layers of the midden so that only the lithified base remained. Even though the upper layers of the deposit have been destroyed, the fossil remnant is enormous by local archaeological standards. Multiplying its 130 meters of length by its average width of 9 meters and average depth of 0.75 meters produces an estimated volume of 877.5 cubic meters! No other site in the region has a midden as large as the one that remains at Middleton. This fact is particularly striking when one considers that the remnant is but a fraction of what the deposit originally looked like before the upper layers were washed away.

Thus far I may have given the reader an impression that indigenous peoples were packed ear to ear onto virtually every inch of Middleton Cay. However I do not believe that was the case. The measurements and observations I used to describe the site and complete the map in Figure 5-6 are based on the extent of surface scatter, not subsurface deposits. In fact, subsurface deposits are more circumscribed at the site: the richest deposits are in the northern half of Habitation 2 and on the western side of Habitation 1. The surface scatter is far more extensive and occasionally occurs in places that one would not expect it to be. Sometimes the surface scatter was observed directly on exposed limestone, particularly in the southernmost region of Habitation 2 that lies up on the ridge. These were likely deposited by wave action that destroyed the upper layers of the fossil midden and washed some of the contents about the site.

### **Excavation details**

Even before I set foot on the island I believed that Middleton was one of the archetypical “small cay” sites. My informal discussions with Brian Riggs, Bill Keegan, and others who had been there led me to expect something remarkable. Consequently, I organized the entire South Caicos leg of the field school around our excavations there. We visited Middleton Cay on seven calendar days in May 2004. All eleven of us worked there on May 18, 19, 20. Brian Riggs joined the crew on May 27 and 28. On May 21 six students worked under Geoff DuChemin while I led three students on the surveys of Long Cay and Moxie Bush. On May 26 we all worked the site for half a day after some brief work at Dove Cay. In total, we spent 69.5 person-days excavating and mapping Middleton.

We completed 47 subsurface units at the site. For clarity’s sake, I have broken these out by type below. At the end of this section I will pull all of these details together to summarize my excavation strategy into a chronological timeline of how the excavations progressed.

**Formal units.** We completed 8 excavation Units, designated “A” through “G”. Units C and F were located Habitation 1, the remaining Units were situated in Habitation 2 (Figure 5-14). With two exceptions, all of the Units were 1 x 1 meter square—Unit D was 1 x 2 meters, and Unit E 2 x 2 meters. Each excavation unit was divided into 10 cm levels. All units were excavated by trowel and brush. Most of the matrix was screened through  $\frac{1}{4}$  inch hardware mesh, although Geoff DuChemin retained some column samples from Unit E for 1/8 and 1/16 inch fine screen faunal analysis. Geoff pre-screened these samples through  $\frac{1}{4}$  inch mesh in the field to identify non-faunal material such as pottery, which he removed and bagged along with the rest of the material we recovered from that provenience. Every unit except Unit B and Unit C were excavated to bedrock or sterile soil. These two units were not very productive, so we bisected them and only excavated half of the unit to bedrock or sterile soil. Unit B was bisected after Level 1 was completed and the southern half was excavated to bedrock at Level 2. Unit C was bisected after Level 2 was completed and the eastern half was excavated to bedrock at Level 4.

**Shovel tests.** We completed a series of 20, 25-cm round shovel tests to both identify promising subsurface deposits and determine the extent of the site (Figure 5-15). The transect began at the southwest corner of Unit A and proceeded due south. We strung a line some 70 meters southward and anchored it when necessary to stakes or available vegetation. At a point exactly 20 meters south of the southwest corner of Unit A, we erected a second line of comparable length on a precise east-west bearing. The intersection of the two lines served as the datum point for the shovel test grid. We affixed flagging tape to the line every 5 meters and labeled the tape with coordinates. The datum at the intersect was given designation 0N/0E, which meant “Zero meters north of the datum and zero meters east of the datum”. The next point 5 meters east of there was labeled 0N/5E, the next 0N/10E, and so on in every direction.

When we dug shovel tests that were not directly on a line (for example, 30S/10E), we took precise measurements and compass bearings to ensure the integrity of our sampling method.

While digging, we would pause after every screen load to measure the depth of the hole.

Although these measurements are not as precise as those obtained from trowel-excavated units, they did provide a good feel for where things were located in the deposit. A student recorded what came out of every screen and noted the depth at which that screen load of matrix originated. All shovel tests were dug to either bedrock or sterile soil. Of these, 8 were positive and produced evidence of a subsurface deposit. These data were a tremendous help and guided the placement of several large, formal Units.

**Test units.** Finally, we executed a series of 50 x 50 cm test units specifically to evaluate Middleton's oval-shaped plaza. The plaza is situated on the eastern side of Habitation 2, approximately 15 meters from the ironstone that forms the island's eastern shore (Figure 5-16). When I formulated the plaza's excavation strategy, my primary objective was to see if the feature was indeed different from the surrounding areas, and if so, how.

I established a transect on a precise north-south bearing down the long axis of the plaza. As before, we ran a line down the transect and marked the appropriate places with flagging tape. This time, I set the units at 3 meter intervals. The northern end of the transect served as the datum point for the grid. Test Unit 1 was placed at the foot of the datum. From there, additional test units were placed every 3 meters. Because the plaza is 21 meters long, there were 8 test units along the transect itself. Test Units 5 and 6 near the center of the plaza showed some disturbance in the soils. Consequently I arrayed 11 more Test Units in a grid pattern around this area, for a total of 19 across the entire feature (Figure 5-17).

**Excavation chronology.** We spent most of the first two days testing the site to understand its extent and layout. As mentioned above, the surface scatter was everywhere and this led us down several blind alleys. On May 18, our first day, we set up three 1 x 1 meter units. Units A and B were situated on dense surface scatter on the western side of Habitation 2. These are the closest units to the fossil midden—that is probably why there was so much surface scatter. Unit C was situated atop a mound in the center of Habitation 1, also in an area of dense surface scatter. We did not open this unit right away—we left it after it had been set up and focused our attention to Habitation 2 and Units A and B.

Units A and B were not very productive beneath the surface. Unit B in particular was so dull that I decided to bisect the unit after Level 1 and only excavate half of the rest of it. It wound up petering out at Level 2 anyway. Unit A was somewhat more productive, so we excavated that entire unit to bedrock. Even before Units A and B were complete it became obvious that the main deposit lay elsewhere. I then decided not to open any more units based on surface features but to instead try to identify where the deposits were via a series of shovel tests. Not wanting to discount Unit A entirely, I elected to base the shovel test grid off of its southwestern corner, as described above.

We started the shovel tests on May 19 while a few students wrapped up Units A and B and others completed the transects. We dug 10 shovel tests that day, beginning at the transect datum 0N/0E, which was positioned 20 meters south of Unit A. As luck would have it, we hit a subsurface deposit on our first try, and recovered fish bones, cracked conch, and fire cracked limestone to a depth of 90 cm below the surface. As we moved north and east, we found that the deposit continued in those directions, especially to the east. Unique features revealed by shovel test 0N/5E, 0N/15E, and 0N/20E led me to open formal Units there. I situated the 1 x 2 meter

Unit D so that its northwest corner abutted the southern end of shovel test 0N/5E, and placed the 2 x 2 meter Unit E directly on the transect line equidistant from shovel tests 0N/15E and 0N/20E.

On May 21 I sent a small group back to Habitation 1 to open Unit C and test that area of the site. Levels 1 and 2 of Unit C were unremarkable so we bisected the unit and only finished excavating the eastern half of it. The lower levels were little different from the upper. I asked the three students who were working Habitation 1 where they thought we should look next. They had already identified an area about 5 meters from Unit C that they thought might be a midden, so I let them have at it. They opened Unit F on the afternoon of May 21 but only completed Level 1 by quitting time.

As it turned out we would not return to Middleton for five days. Because the team had been digging in the field for six of the previous seven days, I had already planned a lab day and some well deserved downtime for the 22<sup>nd</sup>. That evening before dinner we shuttled out to Dove Cay for a recreational snorkel and a quick survey, at which time Winn Phillips discovered the “twin pot.” The weather on the 23<sup>rd</sup> dawned clear enough for the short trip to Dove Cay to begin test excavations (See Chapter 6), but we had to leave before lunch as the weather deteriorated. The remainder of that day was a complete rainout, as was the 24th. Skies cleared somewhat on the 25<sup>th</sup>, but it was too windy to safely leave the harbor. We took advantage of the dry but blustery weather and surveyed Iguana Cay and Horse Cay by truck and wade. Finally, on May 26<sup>th</sup> conditions were suitable to return to the field. We resumed work at Dove Cay, but finding that unproductive, returned to Middleton after lunch to continue our analysis there.

That afternoon the team that had started Unit F in Habitation 1 returned to complete the unit. The rest of the team and I set about identifying additional deposits to sample in Habitation 2. During our excavation hiatus I had carefully reviewed my field notes, which had given me a

few ideas. Based on the material we recovered from Unit E, that area seemed to be associated with a structure, perhaps even the floor itself. I designated this feature the E structure. I wanted to explore this feature, so as soon as we returned to Middleton, I literally crawled through the underbrush surrounding this unit to see if an associated household midden was present. I did not find one, but as I was standing there, thinking and trying to decide what to do next, I was suddenly struck by how close the E structure was to a big, open patch of grass only 8 meters southeast of the unit. I had noticed this area on the first day, but because it was mostly sterile sand with little surface scatter I never paid much attention to it. As I walked around the grass patch anew with our preliminary Unit E excavation results in mind, it finally hit me: this was a plaza, and the E structure was situated directly adjacent to it.

I instructed the team to search for more structures adjacent to the plaza while I and another student delineated and measured the plaza. The plaza is clearly visible, even to the untrained eye. A patch of calf-high scrubby grass forms a clear oval shape and provides stark contrast to the surrounding vegetation, which is higher, denser, and more diverse (Figure 5-18). Several large, flat limestone boulders abut the plaza's eastern side. Moreover, the interior of the plaza is virtually clean—there are no small rocks on the surface.

We identified two more potential structure floors north of the plaza in addition to the Unit E structure. We eventually named these the G structure and the H structure according to the designation of the units we would later open up there. In contrast to the E structure, which is not plainly apparent, these features are clearly visible circular-shaped areas in which mostly grass was growing that were almost completely devoid of rocks (Figure 5-19, Figure 5-20). The G structure is located near the northern end of the plaza. The H structure is situated a few meters to the northeast of the G structure, further away from the plaza. A detailed search of the area

around these features revealed that both had associated household middens. The G structure also had a large pile of small rocks directly on its periphery between the house floor and its household midden (Figure 5-20). These undoubtedly were piled there as the area was swept clean and prepared as the structure was erected. We laid out Units H and G on the two structures' household middens at the end of our afternoon visit to Middleton. While all of this was happening in Habitation 2, the team at Habitation 1 completed Unit F. We left for home feeling quite satisfied with a highly productive day, and eager to return the next morning.

Brian Riggs arrived at South Caicos that evening for a three day visit. He accompanied us to Middleton when we returned the next day on the morning of the 27<sup>th</sup>. I assigned half of the team to excavate Units G and H while the rest of us erected the transect on the plaza and began the series of 50 x 50 cm Test Units. We returned on the 28<sup>th</sup> to complete the plaza excavations, backfill, and map the site. That concluded our work at Middleton. In total, we had amassed 48 field specimen proveniences from our excavations. Those proveniences from formal Units correspond to 10 cm levels. Each positive shovel test and Test Unit was assigned a single FS number.

## Results

### The ceramic assemblage

**Overview.** Our excavations produced 300 sherds weighing a combined 1,357 grams (Table 5-1). Imported ceramics dominated the overall assemblage. Imports accounted for 71.7% of the assemblage in terms of number of sherds (Figure 5-22) and 70.2% of the assemblage by weight (Figure 5-23). Palmetto ware accounted for 28.3% of the sherds by number and 29.8% by weight. Because interpretations based on sherd count alone can be skewed by an over-abundance of “small” sherds (those less than 2 cm across which weigh no more than a few

grams), I will focus on the overall vertical and horizontal distribution of the Middleton ceramic assemblage by weight. Still, I will also use sherd count as a mode of analysis when speaking of smaller subsets of the total ceramic assemblage, e.g., for particular Units, features, or habitation areas. This will help identify specific, localized activities that occurred at various times throughout the site's history.

**Vertical distribution.** Every Unit A-H yielded ceramic material, as did 4 of the 8 positive shovel tests and 7 of the 19 plaza Test Units (Figure 5-24). There are clear tendencies in the data which are best discussed in terms of where the units were positioned at the site. Therefore I have broken down the vertical distribution into Habitation 1 and Habitation 2. For Habitation 2, I break it out further by exploring clear trends in the ceramic assemblages that are associated with various features we identified in this area. Diagnostic or otherwise "interesting" sherds will also be discussed in the vertical distribution section.

Units C and F were located in Habitation 1. Imported ceramics dominated the Habitation 1 assemblage, accounting for 41 of the 45 sherds by number (Figure 5-25) and 152 of the 164 grams by weight (Figure 5-26). The majority of this material (36 sherds weighing 110 grams) was recovered from Unit C. Four small Palmetto ware sherds weighing a combined 12 grams were also recovered from this unit. Unit F did not yield any Palmetto Ware and only contributed 5 imported sherds weighing 42 grams to the Habitation 1 assemblage. All but 3 of the imported sherds were plain body sherds. One small, undecorated, rim sherd with a flat top was identified, as was a small punctated sherd and part of an inturned shoulder sherd that may have come from a red-slipped vessel. The Palmetto ware sherds were small, fragmentary body sherds that bore no decoration.

As discussed above, we spent most of our time exploring the Habitation 2 area at Middleton. Here is where the shovel tests, plaza Test Units, and formal units A, B, D, E, G, and H were located. Interestingly, there are marked differences in the ceramic assemblages recovered from these units. There are clear trends based upon where the units were situated and which features are nearby. These trends remain whether one examines the ceramic assemblage by sherd count (Figure 5-27) or weight (Figure 5-28). The first trend was identified around the E structure and the shovel test transect. This includes all of the positive shovel tests and Units D and E, which lay on the transect and were situated to explore deposits identified by the shovel tests. A second trend was identified around structures G and H. This includes also Unit A which lay just west of these structures. The third and final trend emerged within the plaza itself. I discuss the results we obtained from each of these areas in turn below.

Before I begin the discussion of the three trends, it is important to note from the outset that Unit B is an outlier, both spatially and in terms of the ceramic assemblage. This dissimilarity is probably due to its close proximity to the fossil midden. Recall that this unit was extremely shallow and the least productive formal Unit we excavated at Middleton. Because the material we recovered in Unit B was possibly washed in from the midden, the integrity of the provenience data we obtained for the its ceramics is questionable. Therefore I will discuss it in general terms at the end and not speculate on its relationship to other areas of Habitation 2.

One clear trend emerged around the E structure. This area includes 4 shovel tests and Units D and E. Imported ceramics overwhelmingly dominated the ceramic assemblage obtained from this part of the site. We recovered a total of 141 sherds weighing a combined 643 grams from the E structure area, of which 133 (94.3%) weighing a combined 578 grams (89.9%) were

from imported vessels. Only 8 Palmetto ware sherds weighing a combined 65 grams were identified. Clearly, the people who lived in this area used imported ceramics almost exclusively.

Shovel test 0N/0E sits at the transect datum and was the first one we dug. It yielded 3 undecorated, imported body sherds within 20 cm below surface (cmbs). Another sherd manufactured from the orange, chalky paste typical of Chican bottles was also recovered from this depth. Shovel test 5S/0E produced 16 imported sherds weighing 68 total grams. Most of these were recovered within 20 cmbs, although several were recovered in sterile-looking light, sandy soils between 50 and 60 cmbs. Notably, a rim sherd from a navicular (boat-shaped) vessel, decorated with the classic wet-clay, crosshatch design of the Meillacan subseries was found between 30 and 35 cmbs (Figure 5-29). Several sherds with an unusual chalky white paste were also identified in this shovel test. Shovel test 10N/0E produced two small, undecorated, imported body sherds in grey anthrosol at 50-55 cmbs. Finally, shovel test 0N/15E produced two decorated Meillacan sherds at 20-25 cmbs. The first weighed only 2 grams and was decorated with a wet-clay fine line crosshatch design. The second was a large rim sherd weighing 44 grams, decorated with a wet-clay vertical parallel incised line design and an appliquéd ridge on the interior of the rim (Figure 5-30). No Palmetto ware was recovered in any of the shovel tests.

Units D and E were situated on the transect adjacent to promising shovel tests. Although Unit D was initially located by 0N/5E to explore a non-ceramic subsurface feature, it still yielded a wealth of ceramic material—64 sherds in total, weighing a combined 333 grams. Of the 64 sherds, 57 weighing a combined 303 grams were from imported vessels. All but 7 of these were plain body sherds. Among the 7 were 5 undecorated rim sherds. Three of these exhibited a flat rim top, one a rounded rim top, and the final rim sherd appears to be from a wide, shallow bowl.

Two small decorated sherds bearing round punctations were also observed. Finally, 7 Palmetto ware sherds weighing a combined 30 grams were present. One medium rim sherd with a beveled top was among these. The remainder were small, undecorated body sherds.

Unit E was situated on the transect between shovel tests 0N/15E and 0N/20E because these tests yielded Meillacan ceramics and a drilled bead blank, respectively, between 20 and 35 cmbs. Unit E yielded 53 mostly small sherds weighing a total of 172 grams. Of these, 46 were plain imported body sherds. Two of these had been drilled, presumably in an effort to bind a crack and extend the life of the vessel, but the drilled sherds themselves do not cross-mend. Six decorated imported sherds were also present. Each was decorated with punctations but not all of the punctations were executed in the same manner. Two sherds had a single row of similar oval-shaped impressions that appear to have been made with a bone stylus. These do not cross-mend but are probably from the same vessel. A third sherd has triangular-shaped impressions as if the stylus was inserted into the wet clay at a downward angle. Finally, three sherds have two rows of very large (6mm) round impressions. These also do not cross-mend but are probably from the same vessel, which may have also had a red slip on the exterior. Finally, Unit E produced a single, large Palmetto ware sherd. The sherd was extremely friable, and interestingly, recovered well below the Unit's imported ceramics. The potential significance of this find will be discussed in the ceramic assemblage Analysis section below.

A second trend emerged around the G and H structures. This includes Units A, G, and H. In this part of Habitation 2, Palmetto ware dominated the ceramic assemblage. We recovered a total of 94 sherds weighing a combined 461 grams from the G and H structures area, of which 70 (74.5%) weighing a combined 324 grams (70.3%) were from Palmetto ware vessels. Only 24

imported sherds weighing a combined 137 grams were identified. Even though this area is less than 20 meters from the E structure, the ceramic assemblage is completely different.

Unit A was located west of structures G and H and does not lie on either of their household middens. Unit A produced 42 total sherds weighing a combined 211 grams. Of these 32 sherds weighing 158 grams were Palmetto ware. All of the Palmetto sherds were plain body sherds of various sizes, although one was mat-marked. Notably, this sherd is not from a griddle but a vessel—it is too convex and too thin. The remaining 10 sherds weighing 53 grams were from imported vessels. Six of these were plain body sherds, and two were griddle sherds—strangely, the only griddle sherds of any kind we recovered at the entire site. The remaining two imported sherds were rims. One was a nondescript plain rim with a flat top, and the other was a thin plain rim that may have come from a navicular vessel. This sherd may have also been decorated with a row of small punctations, but the breakage pattern makes it difficult to determine if the indentation was part of the design or simply where a piece of temper had fallen out after deposition.

Unit G was positioned on the household midden associated with the G structure. This Unit produced 21 sherds weighing a combined 99 grams. Palmetto ware accounted for 14 sherds weighing 72 grams. Three of these were rim sherds, while 11 were plain body sherds. Two of the rims displayed a flat rim top; the third a interiorly-beveled rim top. Seven imported sherds weighing 27 grams round out the Unit G assemblage. Five of these were plain body sherds, but of these one was red-slipped and another white-slipped. The remaining two imports were plain, flat-topped rims.

Unit H was situated on the household midden associated with the H structure. This Unit produced 31 sherds weighing a combined 151 grams. Palmetto ware accounted for 24 of the

sherds weighing 94 grams. Twenty were plain body sherds and 4 were rims. Two of the rims had a flat rim top, and two a interior-beveled rim top. There were 7 imported sherds weighing a combined 57 grams. Five were plain body sherds. One displayed a white slip, and another was white slipped on one side and red-slipped on the other. The remaining 2 sherds were both highly decorated. The first was a medium rim sherd with the engraved, curved incised lines typical of the Chican subseries. The second was a large rim sherd with an appliqué lug also typical of the Chican subseries (Rouse 1939:199,Plate 3), (Figure 5-31).

The third and final trend was identified in the plaza. This includes all of the 50 x 50 cm Test Units 1-19. In this part of Habitation 2, there was very little ceramic material at all. We excavated 1,235 liters of matrix from all of the Test Units combined, yet only 13 sherds weighing a total of 60 grams were recovered. Remarkably, all of these were from imported vessels—there was no Palmetto ware at all.

Seven of the 19 Test Units produced ceramics. Test Unit 1 yielded 2 plain body sherds weighing 10 grams and a single decorated rim sherd weighing 4 grams. This sherd had a beveled top and bore the distinctive wet-clay crosshatch design of the Meillacan subseries. Test Unit 2 contained 2 plain body sherds weighing 10 grams. Test Unit 3 contained 2 plain body sherds weighing only 4 grams, and Test Unit 6 had a single plain body sherd of 10 grams. Test Unit 10 contained 1 very small plain body sherd at 1 gram, and a 3 gram decorated body sherd with a Meillacan wet-clay incised, parallel-line design. Test Unit 13 produced a single plain body sherd of 2 grams. Finally, Test Unit 14 contained 2 decorated body sherds weighing a combined 17 grams. One sherd was decorated with the classic Meillacan wet-clay crosshatch design, and the second with a wet-clay parallel line and curvilinear incised line motifs (Figure 5-32) typical of the Chican subseries (Rouse 1939:200,Plate 4).

Lastly we come to Unit B. This Unit was situated in a more isolated area in which provenience is less certain, so I do not include it among any of the three trends discussed above. In any event, the data from Unit B are far from spectacular. It produced only 7 sherds weighing 29 grams. Four sherds weighing 25 grams were imports, the remaining 3 sherds weighing 4 grams were small bits of nondescript Palmetto ware. Three of the imports were undecorated body sherds, but the remaining imported sherd was a punctated rim. The impressions were long and narrow ovals, as if the stylus had been inserted at a 45 degree downward angle. Moreover, the stylus appears to have been a stick or reed as striations are clearly visible in the impressions, perhaps resulting from a rough edge as the implement was pushed into the wet clay. This is another example of the variety of ways in which punctations were executed by Hispaniolan potters.

To summarize, the vertical distribution of ceramics at Habitation 2 breaks out into three clear trends. First, the ceramics from the E structure area are almost exclusively imported. Second, the ceramics from the G and H structure areas are predominantly Palmetto ware. Finally, the plaza area has virtually no pottery at all, although each one of the few sherds recovered happens to be from an imported vessel. These data clearly point to how the site was organized. These interpretations will be discussed in detail in the ceramic assemblage Analysis section below.

**Horizontal distribution.** Recall that the shovel tests and plaza Test Units were each assigned a single FS provenience. Because we did not collect specific depth data for these, it is not possible to include the sherds recovered in these contexts into an analysis of the horizontal distribution of the Middleton ceramic assemblage. Therefore this part of the data only includes Units A-H, which were all excavated by arbitrary 10 cm levels. Even so, material from these

Units account for the vast majority of the assemblage. Units A-H yielded 263 of the 300 sherds (87.7%) weighing 1,159 of the 1357 grams (85.4%) of ceramics we recovered at Middleton. I begin this section with an overview of the horizontal distribution of ceramics across the entire site. Then, to remain consistent with the manner in which I organized the vertical distribution, I break out the horizontal distribution data into three parts: Habitation 1, the E structure area, and the G and H structure area. I will not specifically discuss the horizontal distribution of ceramics in Unit B, although the material recovered there is included in the site-wide totals.

The Middleton ceramic assemblage was recovered from Levels 1 through 4 (Figure 5-33). Level 2 was the most productive, accounting for 382 grams, or 49.4%, of all ceramics. Level 1 was next, with 355 grams (30.6%), followed by Level 3 with 225 grams (19.5%). Level 4 contained almost no ceramic material: only 6 grams (0.5%) were identified in this context.

The overall horizontal distribution of ceramics does not provide specific information about how the site was settled, but it is still a useful measure. It reveals that the substantial majority of the site's ceramic material by weight (69.4%) was recovered well below the surface in Levels 2-4. This fact is important at a site like Middleton, for it indicates that the subsurface deposits are undisturbed. Thus the ceramic distribution data could not have been dramatically skewed by the overwash that destroyed the site's main midden and tossed material about the surface as I discussed earlier.

Although Middleton's ceramic deposit went as deep as Level 4 in places, the Habitation 1 distribution appears to be shallower. Units C and F only yielded ceramics from Levels 1 and 2, even though other material was recovered in these Units as deep as Level 4. Level 2 accounted for the vast majority of the assemblage by sherd count (Figure 5-34) and by weight (Figure 5-35). In Level 2 we obtained 36 sherds weighing 122 grams, 32 of which of these were from

imported vessels. The 4 Palmetto ware sherds were small and unremarkable. Only 9 sherds weighing 42 grams were identified in Level 1. All of these were from imported vessels and none was decorated.

The E structure area horizontal distribution data is based on Units D and E. Both Units produced ceramics in Levels 1-3, but not Level 4. Unit D reached bedrock at the bottom of Level 3, and ceramics were not among the material recovered from Level 4 of Unit E. Among the three ceramic-producing proveniences, Level 1 was the most productive in terms of sherd count (Figure 5-36). However this value is skewed because 45 of the 65 sherds from Level 1 are small (< 2 cm) undecorated body sherds. When the E structure assemblage is viewed by weight, Level 2 has the larger value, followed by Level 1 and Level 3, respectively (Figure 5-37).

Because of the bias in sherd count I will only use ceramic weight as the unit of analysis here. Each Level was dominated by imported ceramics. Level 1 contained 172 grams of imported sherds and 10 grams of Palmetto ware. Level 2 yielded 166 grams of imports and 20 grams of Palmetto ware. Finally, Level 3 contained 102 grams of imports and 35 grams of Palmetto ware—via the single friable sherd discussed earlier. It is interesting that the Palmetto ware was not clustered near the surface, but that a small amount was distributed fairly evenly throughout the E structure deposit.

The G and H structure area includes Units G, H, and A. Here Palmetto ware dominated the ceramic assemblage throughout the depth of the deposit both in terms of sherd count (Figure 5-38) and weight (Figure 5-39). Level 1 contained 16 sherds weighing a combined 79 grams. All were Palmetto ware save a single plain imported body sherd weighing 6 grams. Level 2 was the most productive provenience, and yielded 53 sherds weighing 288 grams. Forty of these weighing 205 grams were Palmetto ware. The remaining 13 weighing 83 grams were imported,

and included the diagnostically decorated Chican sherd described above. Level 3 produced 22 sherds weighing 88 grams. Palmetto ware accounted for 15 sherds weighing 46 grams. The remaining 7 sherds weighing 42 grams were from imported vessels, which includes the Chican appliqué lug. This sherd along comprise 23 of the 42 grams of imported ceramics in this provenience. Finally, Level 4 contained the only ceramic material we discovered below Level 3 anywhere at Middleton. Although Unit A terminated in Level 3, Units G and H continued into Level 4 and combined to produce 3 small plain imported body sherds weighing a total of 6 grams. No Palmetto ware was recovered from this provenience.

**Analysis.** The ceramic assemblage reveals a great deal about the manner in which Middleton was occupied, and by whom. It indicates that Middleton Cay was occupied throughout much of the pre-Columbian period. The period of settlement breaks down into two clear horizons. Significantly, these horizons correspond to the Meillacan phase and Lucayan phase I introduced in the previous chapter. For each phase, I begin with an overview of its ceramic assemblage, then turn to the specific areas of the site that correspond to that period of occupation.

The first stage of occupation occurred in the Meillacan phase, and includes those areas of the site that are dominated by imported ceramics with very little Palmetto Ware. Virtually all of the diagnostic sherds from the Meillacan phase were executed in classic Meillacan motifs. The only exceptions are the single Chican sherd from the plaza, which was not associated with a cultural deposit and therefore was probably left there after the plaza was constructed, and the fragment of the classic Chican mammiform beer bottle. This suggests that the Meillacan phase occupation probably occurred prior to the 14<sup>th</sup> century, as discussed in Chapter 1.

The Meillacan phase included Habitation 1, the E structure area, and the plaza. In general, in these areas imported ceramics dominate, and decorative motifs are almost exclusively Meillacan. Still, a limited amount of Palmetto ware was recovered from this area. Interestingly, the Palmetto ware was not confined to the upper strata as one might expect, but was found in small amounts throughout the deposit, and even as deep as the bottom of Level 3 in Unit E. This suggests that locally-made wares were available to the residents of Middleton throughout the Meillacan phase occupation. If so, then why did the Meillacan phase inhabitants depend so much more heavily upon imported ceramics? There are several possibilities. First, the Meillacan phase could represent a series of seasonal, small-scale, short-term visits by small groups of men from Hispaniola who dropped by to exploit the region's abundant marine resources when not otherwise engaged in activities at home. Because they did not intend to stay at Middleton for long, they were able to bring enough vessels from home to meet their needs. This scenario seems unlikely, for the scale of the Meillacan phase at Middleton strongly suggests a longer-term, highly culturally integrated, and more demographically diverse mode of occupation. A second, and more likely scenario, is that the Meillacan phase residents acquired Palmetto ware on a limited basis as needed. Evidence from MC-12 on Middle Caicos indicates that Palmetto ware was used in the region as early as AD 1000 (Keegan 2007:90). The Meillacan phase residents of Middleton could have acquired some Palmetto vessels in trade with their contemporaries at MC-12. In any event, it is clear that Palmetto ware was used in the Meillacan phase, but was never widely incorporated into the material culture. Potential practical and social reasons behind this fact will be explored at the end of the chapter.

The ceramic assemblage suggests that the Habitation 1 area was occupied during the Meillacan phase. Imported sherds dominate the assemblage, although Palmetto ware is present,

even in the lower deposits. Overall, the Habitation 1 area seems to have been peripheral to the activities on the other side of the island. The deposits are generally shallow and artifact densities are lower across every provenience. It is possible that this area was settled early in the colonization process and the smaller footprint reflects short-term, smaller-scale seasonal activities. Alternatively, Habitation 1 could have been a special-use area, perhaps for conch extraction, given its propinquity to the massive conch piles. Because the full range of domestic activities were less common here, there is less cultural material to find. A third possibility was offered to me in the field by Brian Riggs, based upon his vast personal knowledge of Turks & Caicos archaeology and natural history. He argued that the site was originally established in the Habitation 1 area but relocated to the other side of the cay after a hurricane destroyed the settlement. He observed that a late-season hurricane approaching from the southeast would have driven the sea right over Habitation 1, and referred to the conch shells and other material we found washed up against the ridge as evidence of such a scenario. He may be right—Brian usually is—but unfortunately there is no way to evaluate his or any other hypothesis given the current, limited data excavated from this part of the site. That Habitation 1 remains a bit of a mystery is not terribly problematic in the grand view of Middleton Cay, for it is clear that the real excitement at Middleton was in Habitation 2.

Much of Habitation 2 was occupied in the Meillacan phase. In the E structure area, the ceramic assemblage is dominated by imported sherds with limited Palmetto ware in evidence. All diagnostically-decorated sherds were executed in the motif of the Meillacan subseries. Again, this suggests that the E structure area was most likely inhabited prior to the 14<sup>th</sup> century. The only imported sherd that was certainly not Meillacan was the orange-clay Chican bottle sherd recovered less than 20 cm below the surface in shovel test ON/OE. Given its shallow

provenience, this sherd probably made its way into the deposit after the E structure area was occupied, perhaps by way of an iguana burrow. The plaza also contained only imported wares. The ceramic assemblage from the plaza was comparatively small (n=16), but no Palmetto ware was in evidence. The two diagnostically decorated Meillacan sherds and one Chican sherd identified in the plaza suggest that this feature was built during the Meillacan phase, but continued to be maintained and used afterward.

The second stage of occupation occurred in the Lucayan phase, and includes those areas of the site that are dominated by Palmetto ware with a lower incidence of imported ceramics. The preeminence of Palmetto ware alone speaks to a more recent timing for the Lucayan phase horizon, but so does the nature of the imported ceramic assemblage. Virtually all of the diagnostic imported sherds from the Lucayan phase were of the Chican Ostionoid subseries. There were a handful of local variants of this subseries (Veloz Maggiolo 1972:98-108, in Wilson 2007:144; Rouse 1992:52) which increasingly replaced the Meillacan subseries in north-central Hispaniola sometime in the 14<sup>th</sup> century. It is also the dominant ceramic style from En Bas Saline, which is thought to have been a trading partner of the Caicos Island settlements. Because multiple sherds bearing diagnostic Chican motifs were recovered from the Lucayan phase proveniences, it is apparent that this occupation occurred sometime after AD 1300.

The ceramic assemblage in the G and H structure area consists primarily of Palmetto ware with a minority of Chican imports. All of the Palmetto ware was undecorated save a single mat-marked sherd. It was not a griddle, for it is convex and too thin, and the mat-marking appears on the exterior, convex side. Such mat-marking has been interpreted as an intentional form of decoration that may have had symbolic significance (Berman and Hutcheson 2000:429). Among the imported sherds, the Chican *adorno* and several white-slipped sherds that probably

came from Chican bottles were identified. A single sherd with diagnostic Boca Chica modes of decoration was also recovered, suggesting that the Lucayan phase residents may have had contact with groups further east or south of what is now northeastern Haiti. Finally, we identified one sherd with the odd combination of a red interior and white exterior slip—its affiliation is not known. Most of the G and H structure ceramic assemblage was recovered from the household middens associated with their respective house floors. The fact that Palmetto ware and Chican ceramics were found throughout each level of these deposits indicates that these structures were probably not erected until at least the 14<sup>th</sup> century.

It is significant that the ceramic assemblages of the Meillacan phase and the Lucayan phase occupations are so different. There is no gradual transition from one ceramic style to another. Instead, part of Middleton is Meillacan, while another part is Chican and Palmetto ware. This evidence suggests that the site may have been abandoned for a period of time. It seems that Middleton was initially settled by Meillacan-affiliated peoples from Hispaniola, who occupied the island quite intensively before they departed. After a hiatus, the island was resettled by a later Chican-affiliated group, possibly from the same part of Hispaniola. They established their settlement quite near to, but not on top of, the earlier Meillacan village. This scenario best explains the clear disconnect between the Meillacan phase and the Lucayan phase ceramic assemblages, even though the corresponding settlements lie within 20 meters of each other.

### **The faunal assemblage**

**Vertebrates.** We recovered vertebrate faunal material from 31 of the 48 proveniences at the site. Even so, when compared to other sites we excavated there was a lower volume of faunal material overall. No provenience yielded more than a single 500 ml specimen bag of

bones, and most bags were less than a third full. This may relate to the size and layout of the site. Recall the fossil midden. It is enormous by regional standards, and testifies that Middleton was occupied by a substantial number of people for a long period of time. It is also located west of, and therefore downwind from, the primary habitation areas. Very likely, the residents habitually disposed of their refuse in the midden. They would have been well motivated: all of that garbage would have raised a remarkable stink in the tropical heat. Consequently there would have been fewer remains discarded throughout the site, which seems to be the case given the comparative paucity of material we recovered. This material has yet to be analyzed.

**Invertebrates.** The invertebrate faunal record was analyzed and reveals a number of interesting insights. The assemblage consists of 17 taxa and includes 11 mollusks, 4 corals, some unidentified land snails, and a healthy amount of *Acanthopleura granulata*—the West Indian Fuzzy Chiton (Table 5-2).

Given the millions of conch shells piled on Middleton Cay, it is hardly surprising that the queen conch (*Strombus gigas*) was the dominant marine invertebrate recovered from the deposits. We identified an MNI of 211 for this species, as well as 54.0 liters of cracked, broken conch pieces. It is quite interesting that nearly half of the 211 conch shells were finished tools. We identified 104 finished tools, of which 102 were intact conch picks of every conceivable size. Most of these were recovered from Unit D. Level 2 of this 1 x 2 meter unit singlehandedly accounted for 54 picks; Level 3, a further 15. We also observed 14 conch shells that were either in various stages of manufacture (Figure 5-40) or the leftover remains after the central whorl had been extracted (Figure 5-41). Most of these were also recovered from Unit D. Intrigued, I attempted to re-create this form through a little experimental archaeology—although I cheated and used a screwdriver and a hammer (Figure 5-42). In addition to the conch picks, we also

recovered two conch-lip celts and a hoe. These were found in Unit D and the adjacent shovel test 0N/5E.

Of the 10 remaining mollusks, 4 taxa were presumably captured primarily for food. These include nerites (*Nerita* sp.) with an MNI of 35, *Cittarium pica* (MNI=13), *Codakia orbicularis* (MNI=10), and *Codakia orbiculata* (MNI=1). Because these mollusks yield far less meat than conch, and are far less common at the site, it seems that none of these contributed substantially to the local diet. Four of the remaining 6 taxa of mollusks were presumably collected for their shells, for manufacture into beads or fishing implements. This includes the *Oliva* (MNI=13) and *Olivella* (MNI=4) shells, *Tellina georgiana* (MNI=19) and *Pinctada radiata* (MNI=2). The last two taxa include *Charonia variegata* or the Triton's trumpet (MNI=2, including one intact shell) and a single limpet (MNI=1). The Triton's trumpets may have been collected for their shells as well, for they are sufficiently rare that they could not be relied upon as a food item. The invertebrate assemblage is rounded out with four species of coral, the chiton, and several UID land snails which I lump into a single "taxon" for simplicity's sake. Some of the *Acropora cervicornis* material showed evidence of use, and we identified 9 small abrader tools among this material.

**Analysis.** The invertebrate assemblage offers a glimpse into how the site was organized and what activities were taking place in different parts of the site. To remain consistent I discuss Habitation 1, the E structure area, and the G and H structure area in turn.

Examining the invertebrate assemblage data from Habitation 1 does not produce any epiphanies. There is not a great deal of invertebrate material from Habitation 1, and what was recovered is fairly banal. We identified conch of course, including 11 liters of broken pieces and 14 intact picks. We also recovered nerites, some chiton, a *Codakia* clam, and a *Tellina*. Both

species of *Acropora* were identified but none showed any use wear. Still, these do not live on the banks and therefore could not have found their way into the deposit via any natural means—they must have been deliberately brought to the site from elsewhere. Overall, these finds continue to support the testimony of the similarly unremarkable ceramic assemblage, which suggests that the Habitation 1 area was not intensively used by the residents of Middleton.

The invertebrate assemblage in the E structure area is another matter entirely, for there is abundant evidence that very specific human activities were taking place. The data reveal that Unit D was situated upon the remains of a conch tool workshop. From this 1 x 2 meter unit, we recovered 49 intact conchs and 25 liters of broken conch pieces—nearly half the amount recovered from the entire site. We also observed 69 intact conch picks of every imaginable size—nearly two-thirds of the total recovered from the site. In Level 2 we found 54 conch picks, so that they greatly exceeded rocks and nearly equaled the amount of soil by volume! We also identified 14 conch shells that either had the central whorl completely removed or had been modified in various stages of tool manufacture. Moreover, we identified several specimens of *Tellina* and *Pinctata*, as well as the intact Triton shell, among the matrix, suggesting that other mollusks were being worked there. A single *Cittarium pica* shell, one *Oliva* bead, and one raw *Oliva* shell was found. An *Acropora cervicornis* abrader was identified, as were unmodified specimens of this coral. Raw *Acropora palmatta* and *Solenastria* corals were present as well. Nerites and the ubiquitous chiton were present, albeit in trace amounts. Unlike the corals, these are found locally and may have entered the site via natural means. In Unit E we identified only 10 intact conchs and 6 liters of broken conch pieces. We also observed 11 intact picks, although not in the concentration observed in Unit D. *Tellina*, *Pinctata*, and both species of *Codakia* were present, as were nerites, chitons, and both species of *Acropora* corals. Thus far from these

materials, the assemblage of Unit E looks broadly similar to that of Unit D. However, there are some taxa far more abundant in Unit E. First, Unit E yielded 7 *Cittarium pica* to Unit D's single specimen. These are food items, but their shells were also employed as raw material for cooking implements, fishing tackle, and jewelry (Jones O'Day and Keegan 2001). Second, Unit E produced many more olive shells and beads. We identified 3 *Oliva* beads and 2 raw shells, and 1 *Olivella* bead and 3 raw shells, as compared to the 2 *Oliva* recovered from Unit D. Unit E also produced the three UID land snail shells.

Differences in the invertebrate assemblages between Units D and E in the E structure area suggests that different activities were taking place in these two proveniences despite the fact that they are situated only 12 meters apart. In Unit D, food remains and personal items are rare while finished tools and shell "debitage" dominates. Thus it must be a workshop where conch and other shells were modified into tools and other cultural items. In contrast, Unit E looks more like a domestic area. As a 2 x 2 meter unit it was twice as large as Unit D, but it has one-fifth fewer intact conch, one-fifth fewer tools, one-fourth the volume of broken conch pieces, and absolutely no partially-modified shell forms. Unit E also produced the remains of food items like *Cittarium pica* and the land snails, and contained a comparative abundance of personal items like *Oliva* and *Olivella* beads and shells. There is no clear house floor near either Unit D or E, but I believe that at least two structures were present in this area. One may have been erected to shield the Unit D workers from the elements as they worked, and to store the finished tools and perhaps ceramic vessels, for many sherds were also recovered from this provenience. If so, it could be analogous to a hobby workshop or shed in the modern backyard. It could also reflect that part of the household space that was dedicated to this activity—our 1 x 2 meter unit was by no means large enough to identify the entire range of activities in a structure which likely measured 10 m or

more in diameter. The other structure must have been situated near, or perhaps on top of, Unit E. This area had both food and valuable personal items, and interestingly, very few rocks in the matrix. This is suggestive of a domestic house floor (Keegan 2007:140). The fact that the Unit E is located only 8 meters from the plaza corroborates this interpretation: houses, especially those of chiefs and other elite, were frequently located adjacent to plazas near the center of the settlement (Keegan 2007:173).

The invertebrate assemblage in the G and H structure area also reveals information about site usage. Of the two units excavated in this area for which data is available, Unit A is the least noteworthy, probably because it was in the open and not directly associated with a particular structure. It yielded limited amounts, but a wide variety of invertebrate remains. Oddly, conch was comparatively rare in this provenience. We found 10 intact conch, only a third of a liter of broken conch pieces, and 2 conch picks. We also recovered one or two specimens each of *Tellina*, *Cittarium pica*, *Codakia orbicularis*, and chiton, as well as trace amounts of the corals *Acropora cervicornis*, *Solenastrea*, and *Montastrea*. Unit G was more instructive. In this small 1 x 1 meter unit, we recovered a remarkable 12 liters of broken conch pieces, three conch picks, and a Triton shell apex, but no intact conch shells. There were small amounts of other food-item mollusks, including a single *Cittarium pica* shell, 2 *Codakia orbicularis* clams, a nerite, and a chiton. Notably, three *Tellina* were identified, as well as a volume of *Acropora cervicornis* coral that included 4 of the 9 abraders we recovered at the entire site. These suggest that beadmaking occurred in the G structure, which is corroborated by the number of bead blanks we also obtained from this unit (see below). An *Oliva* shell was also recovered but it had not been modified.

The limited amount of material makes any insight into the goings-on around Unit A little more than speculation, but the invertebrate material from Unit G sheds light on the activities that took place in the associated structure. The food item remains are hardly surprising, but the presence of beadmaking material recovered amongst otherwise ordinary household refuse suggests that some members of the household were also engaged in beadmaking activities as part of their regular routine. This runs counter to the observed trend that the beadmaking industry in the Turks & Caicos was centered around small scale, special-use sites largely established to produce beads for export. This point will be discussed further later in the chapter.

In addition to illuminating the range and location of activities at Middleton, the faunal assemblage makes it possible to hypothesize about the manner in which Middleton was occupied first in the Meillacan phase and later in the Lucayan phase. Recall that the Meillacan phase includes Habitation 1, the E structure area, and the Plaza. It is marked by a predominantly Meillacan ceramic assemblage, and appears to have been occupied prior to the 14<sup>th</sup> century. The most striking aspect of the invertebrate faunal record from this period is the cache of conch picks recovered from Unit D. From this, it appears that shell tool manufacture was a dedicated industry at Middleton. The cache of 69 conch picks in Levels 2 and 3 of Unit D is, to my knowledge, unprecedented in the region. The sheer number and full range of tool sizes suggests that these items were being manufactured not only for local use, but also for export. Because the ceramics link the Meillacan phase of Middleton to the north-central coast of Hispaniola, specifically northeastern Haiti, it is logical that settlements there were the primary market for such tools. Moreover, archaeological evidence from northeastern Haiti suggests that conch tools just like those recovered from Unit D would have been in demand in that area. In 1997, Keegan and a team of Earthwatch volunteers excavated a site on the small island of Ile à Rat, located in

the mouth of the Baie de l’Acul near the modern city of Ft. Libertè. The site has two occupation horizons separated by a layer of sterile sand that was presumably deposited during an “episode of inundation” via storms or higher sea levels (Keegan 1997b). The lowest horizon contains predominantly Meillacan ceramics and was radiocarbon dated to between AD 900 and AD 1300, while the upper horizon contains only Chican ceramics and was radiocarbon dated to after AD 1300. Keegan discovered that “Throughout the [entire] deposit the conchs are extremely small, averaging about 11 cm in length. The legal size for conchs today is about 20 cm long” (1997b). Two 11-cm conch could fit end to end across the width of this page. Such animals are tiny compared to the conch we observed at Middleton. He attributes this not only to overfishing but also to shell disposal behavior, where only smaller conch were brought to the site for processing (1997b).

If the small conch and mollusks found at Ile à Rat are representative of the status of the regional fishery in this area of north-central Hispaniola, then it is possible that some of the conch tool cache recovered in Unit D was manufactured for export to settlements in and around the Baie de l’Acul, where raw materials for such tools were less abundant. Admittedly, trade in conch tools is not as glamorous as trade in exotic beads and fancy, decorated pots. However, this discovery illuminates an important, and heretofore unappreciated, aspect of the economic relationship between Meillacan settlements in the southeastern Bahamas and their homelands in Hispaniola. It demonstrates that conch tools, in addition to foodstuffs, salt, and beads, could have been an appreciable part of regional exchange, which would mean that the Meillacan phase Turks & Caicos economy was more diversified than is currently thought.

There is another intriguing aspect of the conch tool cache. If these tools were manufactured for export then they had value. Why were so many left behind in the first place?

Recall that there is no gradual transition between the ceramic assemblages of the Meillacan phase and the Lucayan phase, suggesting that the cay was uninhabited for a period of time between these occupations. That these perfectly good and valuable tools were abandoned suggests that some sudden, unanticipated event drove the Meillacan phase residents away. Perhaps a storm approached and they evacuated to higher ground on a larger, more elevated island. If the tempest were severe, it may have destroyed their infrastructure on the Middleton and led them to abandon the site. An alternative explanation is that the Meillacan phase residents were driven off by another group. There is evidence from the Meillacan phase ceramic assemblage that Palmetto ware was sporadically acquired, possibly from the residents of MC-12 on Middle Caicos to the north. Yet the Meillacan phase residents never fully incorporated Palmetto ware into their material culture, relying instead upon the imported ceramics that linked them to their homeland in northern Hispaniola. This suggests that the residents of Middleton maintained a separate social identity from those at MC-12. Perhaps tensions between the two groups caused the Meillacan phase residents to flee. The presence of multiple, partially-finished conch shell tools suggests that the decision to leave was a sudden one. The arrival of a hostile group at Middleton could have precipitated such haste. Such conflict was observed at the Meillacan Governor's Beach site on Grand Turk, so inter-group strife in the Turks & Caicos is by no means unprecedented. And there is no reason that the invaders would have taken the conch tools for themselves, either. The Governor's Beach site contained hundreds of finished beads—certainly a valuable commodity—that were intentionally destroyed in a fire, presumably by the invading force (Keegan 2007:90), almost as if the aggressors wanted to blot every aspect of the opposing culture from the local landscape. Whether the impetus behind the Meillacan phase residents' decision to abandon Middleton was natural or anthropogenic, the end result

seems clear. The Meillacan phase residents left Middleton in a hurry, and the cay was not permanently resettled until after the Meillacan/Chican transition had fully run its course in Hispaniola.

The people who re-colonized Middleton situated their settlement near to, but not atop of, the Meillacan phase village. The invertebrate faunal assemblage indicates that the Lucayan phase residents were making beads in the G and H structure area. Beyond that, the limited invertebrate faunal assemblage does not provide a great deal of insight into this period of occupation.

### **Other cultural material**

**Beads.** The excavations at Middleton revealed that people were making beads in both the Meillacan phase and the Lucayan phase. Across the site, we recovered 4 round blanks, 2 drilled but incompletely rounded beads, and two drilled and rounded, finished beads (Figure 5-43). Ironically, none of these were manufactured from the cherry jewelbox! This is likely because that mollusk would not have been abundant in the environment around Middleton. It attaches to a fixed submerged object, and the cay does not feature a great deal of permanently inundated coastline or many reefs in the area. Of the 8 items I could identify that 4 were made from conch. Two are somewhat translucent and may be *Tellina* sp., one appears to be made of *Codakia* clam, and the final bead is unidentified to genus—but it is not red. One finished bead was recovered in Habitation 1, from Unit C. Because we did not identify any raw blanks in this area, I assume the bead was simply dropped here. However, Habitation 1 was not heavily excavated so sample bias is certainly possible. In any event there is more abundant evidence from Habitation 2. Two blanks, two drilled and unfinished beads, and a finished bead were recovered in the Meillacan phase, E structure area. All but one unfinished drilled bead were

obtained from Unit E, which indicates that beadmaking was one of the household activities of those who occupied the E structure. Interestingly, all of these items were identified in Level 1. This could mean that beadmaking was not widespread when the site was first established, but became important as “bead fever” swept the region after the Meillacan-affiliated peoples fully recognized the opportunity. The remaining drilled blank was recovered from shovel test 0N/20E, immediately adjacent to Unit E and quite possibly within the original structure. There is no depth provenience for this item, but it did motivate me to locate Unit E in the vicinity. The remaining material was located in Unit G and corresponds to the later, Lucayan phase occupation. Two undrilled conch blanks were identified in addition to the beadmaking remains and tools discussed earlier in the invertebrate faunal assemblage section. This data indicates that beadmaking took place in the G structure, and that this activity remained an important part of the regional economy well into the Chican era, at least at Middleton Cay.

**Lithics.** Several igneous or metamorphic stone items were recovered from the site. These are noteworthy because these materials are not available in the Bahama archipelago and must have been acquired in Hispaniola. Exotic stone items were identified in both the Meillacan phase and the Lucayan phase. For the Meillacan phase, we identified a tiny greenstone celt chip on the surface near Unit E and a pink chert microlith in shovel test 0N/15E, likewise adjacent to Unit E. Chert microliths such as these were incorporated into manioc graters in the Bahamas (Berman 1995, Berman et al. 1999) and on the northern coast of Hispaniola (Deagan 2004:615), but also have been associated with bead production because they were used as drill bits (Carlson 1993, Sinelli 2001:91). While either of these uses are possible, given the item’s location near the beadmaking activities in Unit E and shovel test 0N/20E, it is most plausible that the microlith was used as a bead drill. In the Lucayan phase, Unit H yielded a surprising number of large

greenstone flakes. Some had been rounded in places, suggesting that these were the remains of a celt or celts that were broken through use and discarded (Figure 5-44). It is intriguing that such a volume of greenstone debris was recovered in Unit H but nowhere else at the site. This could certainly be the result of sample bias given our limited excavations, but might also reflect some special activity that took place in the H structure, perhaps woodworking or some other sort of craft production. Elsewhere, a shaped greenstone item of indistinguishable use was identified at the waterline near the fossil midden. It has clearly been smoothed and modified but is not yet in the shape of a celt (Figure 5-45). Perhaps it was a work in process when it was lost. In any event, the presence of imported greenstone items and chert microliths at the site corroborates other lines of evidence which demonstrate that the residents of Middleton were regularly engaged in trade with settlements in Hispaniola. Moreover, this relationship continued throughout both the Meillacan phase and the Lucayan phase, as exotic stones and other Hispaniolan items were obtained in exchange for foodstuffs, conch tools, and beads.

### **Radiocarbon chronology**

Two radiocarbon dates were obtained from Middleton. Both were obtained from intact, punched *Strombus* shells that were specifically selected to establish the chronology of a particular feature or provenience. Both samples were submitted to Beta Analytic for standard radiometric analysis. Both dates were calibrated and adjusted for local reservoir correction.

The first sample was recovered from Unit D, Level 3. It was a very large (1.35 kg) punched *Strombus* shell from the very bottom of the terminal level, and it literally rested on sterile soil at 30 cm below the surface. I selected it to date the beginning of the Meillacan phase occupation that was so well evidenced in the E structure area. It was assigned designation Beta

242673. The intercept of the radiocarbon age with the calibration curve occurred at Cal AD 1160 +/- 50, with a two-sigma range of Cal AD 1040 to 1260 (Appendix C).

The second sample was recovered from Unit H, Level 3. It also was a large punched *Strombus* shell that was resting immediately on top of the Chican adorno recovered from this provenience at a depth of 26 cm below the surface. I selected it to date the Lucayan phase that was well evidenced in the G and H structure area. It was assigned designation Beta 242674. The intercept of the radiocarbon age with the calibration curve occurred at Cal AD 1440 +/- 50, with a two-sigma range of Cal AD 1340-1490.

**Analysis.** The radiocarbon dates obtained from Middleton clearly corroborate the testimony offered by the ceramic assemblage. The date from Unit D, Level 3 confirms that the E structure area was occupied first, beginning in the middle of the 12<sup>th</sup> century AD. The date also confirms that the Meillacan phase of Middleton is contemporaneous with other Meillacan sites in the region, including Spud (discussed later in this chapter), Governor's Beach on Grand Turk (Carlson 1999:144), and MC-8/MC-10 on Middle Caicos (Sinelli 2001:87). This date also overlaps with those obtained from Coralie on Grand Turk, where Ostionan pottery dominates, and MC-12 on Middle Caicos, where Palmetto ware was almost exclusively recovered (Keegan 2007:139). This finding is significant: apparently three distinct groups of people inhabited the Turks & Caicos in the middle of the 12<sup>th</sup> century. This point will be explored in detail at the end of the chapter.

## Architecture

**The plaza.** Thus far I have discussed the plaza in broad strokes, but it is important to understand more about how it was made. Because plazas are rare in the Turks & Caicos I anticipate some skepticism, and will therefore be thorough. I hope to demonstrate that this

feature was intentionally designed and deliberately constructed for use as a plaza, and is not a natural feature.

The first line of evidence that demonstrates that the plaza was intentionally constructed comes from its location and orientation. It lies on the eastern side of Middleton Cay, and it approaches to within 15 meters of the ironstone that marks the beginning of the cay's eastern shoreline. This situation maximizes the plaza's eastern frontage, and east was the Hispaniolans' cardinal direction (Harris 1994). The plaza is oval shaped with axes of 21 meters by 12 meters. Importantly, the long axis is oriented on a nearly exact north-south bearing. When we erected the transect we situated the transect line with a compass to ensure the grid was aligned with magnetic north. This was largely a matter of archaeological convention, and was not based upon any special feelings we had about the plaza initially. In doing so, we placed the rods to which we tied the line at what we interpreted to be the exact top and bottom of the oval. Again, this was simply to ensure that our grid covered the entire feature and that all of the test units were precisely plotted. Almost immediately, I noted that the transect neatly bisected the plaza, so I initiated a series of measurements to determine if this were indeed true. I and a student ran a tape measure perpendicular to the transect line at various points along the transect. Each time we ensured that the tape measure was perpendicular to the transect by confirming the tape's true east-west orientation with a compass. At every point we measured, the linear measurement of the plaza's width was halved at the transect, within a difference of no more than 30 cm. Because these variances probably resulted as much from our interpretation of where the sides of the plaza "ended" as anything else, I felt comfortable with the results of this exercise. It demonstrated that the plaza was precisely arranged.

The second line of evidence is revealed in the constitution of the plaza. As the reader learned earlier, the plaza is covered almost exclusively by stunted grasses that seem to thrive within it but were observed only in small, isolated clumps elsewhere on the island. As we excavated the 19 test units, the reason for this anomaly became apparent. Most of the soil within the plaza is sterile sand, light tan if not white in color, extremely low in organics, and very well drained. These hardy grasses are essentially the only thing that can survive in this water-starved medium. The soils in the plaza stand in contrast to those found immediately outside of it, such as in Unit E, which was a mere 8 meters distant. Outside of the plaza we observed the familiar grey anthrosol. Within the plaza, we detected primarily sterile beach sand that must have been brought in from the beach or surrounding banks. Notably, the soils near the center of the plaza were different. Here we detected darker soils—darker even than the grey anthrosol, and occasionally approaching black. The dark soils overlain the light sand layers, and varied in depth from about 15 to 30 cm. This fact initially led me to suspect that there was some disturbance in the central part of the plaza—perhaps even a burial—which is why I directed that so many of the subsequent test units be placed there (Figure 5-17). However, our excavations here yielded virtually no cultural material, just as in those areas where exclusively lighter soils were present. Intrigued, I began looking for the source of the dark soils. I eventually determined that this soil could have been obtained elsewhere on the cay, especially in the lower-lying swampy areas we observed in an unoccupied area south of Habitation 1 that lay less than 100 m from the plaza. Although this material was presumably richer in organics (in fact, the only non-grass vegetation in the plaza was growing there), none of this seems associated with direct human activity in this area. The plaza's dark soils, like its light soils, were almost completely culturally sterile. This includes not only ceramics, as discussed above, but also shell and bone,

which were observed only in trace amounts here and throughout the plaza and never in any appreciable concentration.

The plaza matrix also lacks the inclusions that one would expect to find in both natural and anthropogenic soils. There were virtually no rocks in any of the matrix we screened. This fact alone suggests that the plaza soils were not naturally occurring. As anyone who has dug a hole in the Bahama archipelago knows, limestone rocks of all shapes and sizes are as ubiquitous as lobbyists in Washington. Interestingly, we did observe a large concentration of golf ball to fist-sized rocks littering the area immediately west of the plaza. From this fact, it seems that the plaza matrix was picked clean of rocks. This must have occurred during construction, as raw matrix from either the beach or the swampy area at the south of the island was dumped in the plaza and picked through to remove any sizeable inclusion. It is significant that these rocks were discarded exclusively to the west of the plaza and not willy-nilly around its perimeter. Piling rocks here would make the adjacent area west of the plaza unsuitable for habitation—no one would situate their house upon a pile of rocks. This suggests that the western side of the plaza was viewed as a socially unacceptable place to live—the profane opposition of the sacred east. The Taino viewed the island of Hispaniola as a living animal with its head to the east and anus to the west (Harris 1994). At Middleton, west may have also represented the “anus” of the island, where people should not live and trash and filth were appropriately deposited. The fossil midden is also located westward of the settlement, perhaps also for this reason, as well as the simple logic of keeping a huge pile of rotting garbage downwind of the main settlement.

The final line of evidence relates to the relationship of known structures to the plaza. The southeast corner of Unit E is 8 meters northwest of the plaza boundary. Because this unit was only 2 x 2 meters in size and appears to be part of the house floor, the walls of the structure itself

must have been even closer, possibly abutting the plaza directly. The Unit G structure was similarly placed, albeit to the north and not as directly adjacent to the plaza—it sits about 10 meters distant. This is consistent with known patterns of site layout in which some households are located nearer the center of the village and adjacent to the plaza, if one were present.

To summarize, the plaza is a nearly precise oval, situated on the culturally-significant eastward shore of the island. Its long axis is situated on a precise north-south bearing, which effectively enhances its symbolic significance by maximizing exposure to the rising sun, moon, and stars. The soils that form the plaza are virtually devoid of cultural material and appear to have been picked clean of rocks. These rocks were intentionally discarded to the profane west of the plaza. Finally, two of the structures we identified at the site are situated adjacent to the plaza, in line with established patterns of site layout. Based on these facts, I argue that this feature cannot be a natural occurrence, but is a plaza constructed and used by the residents of Middleton Cay.

The few ceramics we identified in the 19 test units provide some insight into the plaza's history. Recall that all of the 13 small sherds were from imported vessels, and that of the 4 that were decorated, 3 were Meillacan and one was Chican. From these facts, I concluded that the plaza was initially constructed and used during the Meillacan phase occupation. While these facts seem clear, the role that the plaza played during the Lucayan phase is less obvious. There are two possibilities. First, the Lucayan phase residents that recolonized the island after the period of abandonment could have largely ignored the plaza, viewing it as just another part of the landscape. Alternatively, the Lucayan phase residents could have rehabilitated the plaza and actively used it. I argue that the archaeological evidence confirms the latter scenario: that the feature was restored and used as a plaza in the Lucayan phase. The first line of evidence

supporting this hypothesis is found in the Lucayan phase material culture we recovered from the test units: namely, there was not any. Save the single Chican sherd, the plaza area was devoid of Lucayan phase cultural material, and there was no Palmetto ware whatsoever. This clearly suggests that the area was kept clean and that people were not using the plaza for regular household activities in the Lucayan phase. If the plaza were just part of the landscape, we should have found bits and pieces of material in similar concentrations to those we identified elsewhere, or perhaps even household middens or some other evidence of concentrated activity. We did not. The second line of evidence relates to the different soils we found in the plaza. The soils seem to have been brought in from two different places: the light sand from the beach or shallows, and the dark soils from the swampy area south of Habitation 1. This suggests that the soils were brought in at different times by different people. When the Lucayan phase settlers returned to the island, they set out to rehabilitate the plaza. Depending on how badly the plaza had deteriorated during the period Middleton was abandoned, they might have had to re-level the feature with additional fill from elsewhere. Given that the dark soils overlay the lighter beach sand in the center of the plaza, it seems that the Lucayan phase people moved soil from the south side of the island to complete the restoration. Because this material is likewise devoid of rocks, the Lucayan phase people presumably behaved like the Meillacan phase residents before them, picking through the soil and discarding any inclusions to the culturally-appropriate area west of the plaza. Once restored, the plaza seems to have been maintained, for we found no greater number of rocks or cultural material on the surface than we did in the subsurface deposits.

Now that I have established the existence of the plaza, I will turn to why it was built and how it may have been used. Because plazas are not common in the Turks & Caicos, Middleton is in elite company. MC-6 on Middle Caicos is one of the few plaza communities, and it is

“unlike any other site in the rest of the Bahama archipelago” (Keegan 2007:183). MC-6 was a “gateway community” through which the abundant resources of the southern Bahama archipelago passed to the classic Taino cacicazgos of northern Hispaniola. As such, it was an “economic hub” as described earlier in the chapter; a regional capital and the economic and social powerhouse of its time. Although Middleton is certainly not as complex as MC-6 (See Keegan 2007 for the most comprehensive analysis of MC-6 in print), the mere fact that it also has a plaza means that Middleton, too, was an important place inhabited by important people. The Meillacan phase occupation of Middleton predates the establishment of MC-6 by nearly three centuries. This suggests that Middleton, like MC-6 after it, was one of the central settlements in the Turks & Caicos during the 12<sup>th</sup> and 13<sup>th</sup> centuries, and perhaps beyond. In this context, the plaza represents the site’s overall economic, social, and spiritual power. That is why it was built—to project these.

Plazas are at once public space, a means to preserve cultural identity, and a statement of individual authority. Plazas are used by the public as communal gathering space during the course of daily life. Like the town square in small-town America, plazas are a place where people can meet and visit, and perhaps conduct business, on common ground outside of the domestic arena. They are also a “place of assemblies and festivities [where] the Indians held their *arietos*, dances accompanied by musical instruments and songs of their past and their customs” (Sauer 1966:63-64). These crucial activities bind the group as a cultural unit and define and preserve the people’s shared history, values, and identity. Plazas are also physical manifestations of chiefly power. Whereas most houses in the settlement “formed a random and loose cluster,” the “great house of the cacique” always fronted the plaza (Sauer 1966:63). Chiefs located their houses here to demonstrate that they were the axis of everything, both literally and

figuratively. This not only ceaselessly reinforced their chiefly status to the rest of the community, but also would have immediately been appreciated by anyone who visited the settlement from elsewhere. As such, plazas enable chiefs to justify their authority over their own people, and impress their importance upon everyone else in the region, including other elites.

Although it is comparatively small, there is no reason to believe that the plaza at Middleton was used any differently than plazas at settlements in Hispaniola. Compared to public architecture elsewhere in the West Indies, the plaza at Middleton certainly did not require many man-hours to build. Thus the manner in which it projects chiefly authority does not lie within the special knowledge or organizational skills needed to design it, or in the power to conscript labor to build it. At Middleton, the plaza projects chiefly authority simply because it *exists*. A chief needs to locate his house on a plaza because that is what chiefs do, and have always done. Any chief who does not live on a plaza is somehow a lesser figure.

As I have hopefully demonstrated, the plaza speaks to the social organization at Middleton. It is tangible evidence that corroborates the theoretical argument presented at the beginning of this chapter, which holds that only a chief could manage the kind of process we observe at the site. Based on the evidence, I argue that the first true “chiefs” in the Turks & Caicos lived at Middleton Cay, beginning in the 12<sup>th</sup> century AD.

**The stone “compass.”** The area northeast of the plaza is littered with limestone slabs and boulders that range in size from that of a surfboard to that of a washing machine. Aside from some limited surface scatter that was probably washed in from elsewhere, we generally did not observe any evidence of indigenous activity in the area. However, further to the northeast and directly adjacent to the tidal flat at the north tip of the island, I discovered four slabs arranged into a clear square pattern. Notably, three of these were erected on end and were

partially buried, while the fourth appeared as if it had once also stood on end but had fallen over (Figure 5-46). I am an unapologetic skeptic when it comes to stone alignments (to paraphrase Freud, “Sometimes a line of rocks is just a line of rocks”), but this particular feature gave me pause. First, the feature cannot be natural. These slabs would have naturally lain flat and must have been placed upright and partially buried by human beings. Second, compass readings and measurements revealed that the slabs were arranged with one each at the four cardinal directions (Figure 5-47), effectively creating a stone “compass.” As such, this feature could be a sort of indigenous astronomical or navigational device. Perhaps it was used to measure time or the seasons through the movements of the sun or the stars. Finally, it could be historic, although I cannot imagine why anyone from South Caicos would erect such a thing on Middleton Cay.

**Housing.** We identified four structures at Middleton. Before I discuss these, it is important to understand how housing can tell us a great deal about a site’s population, demographic makeup, and social organization. This context will make it easier for the reader to appreciate what the Middleton houses tell us about the people who lived in them.

Keegan (1992) constructed a model to estimate the total population of the Bahama archipelago at contact. To do so, he first constructed a formula to estimate the population of individual sites. This formula was based upon ethnographic accounts and archaeological data from Cuba, the Bahama archipelago, and elsewhere. From these, he determined that houses averaging 10 meters in diameter, in which resided “complete lineage sections” of 20 people that included multiple households, would have been placed 30 meters apart at an average site (1992:167). This led him to his final formula:

All of the evidence on community size, drawn from such disparate sources as Columbus’ diario, overall Lucayan site dimensions, site MC-6, and precontact settlement in other regions, gives a consistent figure of 1 house per 33 meters of site length (0.03 houses/m) with

20 member households occupying each house. Thus community size can be retrodicted by multiplying the length of the site by 0.6 persons per meter (i.e., 20 persons per house times 0.03 houses per meter of site length) (1992:168).

Keegan's model was designed to estimate the contact-era Lucayan population. The Lucayans certainly inhabited Middleton during the Lucayan phase, but not in the Meillacan phase. Still, I believe the model can be profitably applied to the earlier period. Keegan's model relies upon archaeological evidence from the central Bahamian Lucayans' ancestral homeland of Cuba, as well as ethnographic analogy with the ancestral West Indian homelands in South America (1992:166-167). If these assumptions applied to the Lucayans in the late 15<sup>th</sup> century, then they can reasonably be applied to the Meillacan phase colonization of the region that occurred but a few centuries earlier. In short, the Lucayans did not "invent" this settlement pattern. It had been part of their collective ancestors' strategy for hundreds, if not thousands of years, and there is no reason to believe that the Meillacan peoples behaved any differently.

Keegan's calculus is useful to understanding Middleton, but it must be adapted to the unique circumstances of small cay environments. First, Middleton is not a "linear" site akin to those situated behind the dunes on large islands in the Bahama archipelago. Sites on large islands are linearly arranged—that is, they tend to be long and narrow—in order to maximize everyone's access to the sea. There is no such constraint on small cays, because the sea is rarely more than a stone's throw away from any point on the island. Therefore Keegan's "linear" measurement of site length must be modified for small cay sites to somehow reflect this situation. This can be achieved by measuring the entire coastline of a small cay that is adjacent to the site. For example, if the site covers an entire cay, then substitute the island's entire perimeter for Keegan's "linear" measure. Or in the particular case of Middleton, that portion of the island's coastline that is contiguous to the Habitation 2 area. By my calculations, that gives

Middleton a “linear” coastal measure of 380 meters. Multiplying this measure by Keegan’s 0.6 persons per meter yields an estimated population of 228 persons. I did not include Habitation 1 in this calculation because we did not identify any significant evidence that domestic activities occurred in this area. If Habitation 1 were included, the coastal measure would jump to 495 meters and the population estimate to 297 persons. But to be conservative, I believe that the Habitation 2 figures are more appropriate.

A settlement of this size would have been comprised of people from all walks of life. Thus, the Middleton settlement would have been demographically and socially diverse. Men and women, children, adolescents, and the elderly would all have been present. Individuals would have resided with other members of their lineage in their own structure, or if the lineage were large, perhaps several structures. Yet because all 228 people likely did not reckon descent from a single ancestor, multiple lineages must have been present at the site. The size of the population suggests that at least one of these lineages must have had an enhanced social status over the others. A settlement of more than two hundred souls would have required an organizational authority embodied in an individual cacique who belonged to an elite or chiefly lineage. His social power enabled him to coordinate and direct the labor of members of the community that belonged to lineages other than his own, not only to meet the group’s basic economic needs, but also fulfill its social obligations to each other and to other settlements. The chief would also have coordinated and controlled the long-distance exchange with Hispaniola. This was a complicated affair that truly required a central decision maker, as discussed earlier in this chapter.

At first glance the housing we identified at Middleton does not reflect a community of perhaps 228 individuals. Our work only identified 2 probable structures (D and E from The

Meillacan phase) and two certain structures (G and H from The Lucayan phase) at the site. However, given the population estimate and other evidence from the site, what we found cannot represent all of the housing at Middleton. First, if houses were occupied by an average of 20 people in a single lineage, then as many as 11 structures (228/20) housing a number of lineages would have been necessary to shelter the populace. Second, the size of the site's fossil midden strongly implies that more than two households lived there at a time. It measures nearly 900 cubic meters by volume, and that does not include the material that was washed away from this lithified base. Third, the plaza would not have been built at a hamlet site with only two houses—plazas are designed to project power, as discussed above. Finally, Middleton's sister settlement Spud was established almost simultaneously, which suggests that physical space and/or resource availability at Middleton quickly reached capacity. This is a requisite condition to begin the process of settlement pairing described earlier. There would have been no need to establish a new paired village had there been sufficient space on Middleton and enough resources within its catchment, which is certainly large enough to accommodate far more than 2 houses and feed more than 40 people. Nevertheless, the four structures we identified and examined provide an excellent sample of the site's layout and its residents' range of behaviors, even if we were not able to identify the location of every single household. Now that the theoretical foundation has been laid, I turn to the specifics of the structures themselves.

The E and D structures are associated with the Meillacan phase. Here we did not identify a specific structural outline, but the presence of structures associated with Units D and E is implied by the material recovered within. The E structure is located nearest the plaza. This fact suggests that it was occupied by an elite lineage that may have included the cacique, for it was common practice in the West Indies to situate the chief's residence near the center of the village

(Sauer 1966:63; Rouse 1992:9,15). Within this structure, we identified a comparatively high proportion of decorated ceramics, personal items like beads, and few faunal remains. We also discovered evidence of beadmaking activity. The D structure is situated approximately 10-15 meters west of the E structure. Here we identified the conch tool workshop and a far lower number of decorated sherds despite the unit's comparatively larger sample of ceramics.

The G and H structures are associated with the Lucayan phase. The G structure is located adjacent to the northern end of the plaza, at a distance of 10 meters. It is the larger of the two Lucayan phase structures, with an east/west axis of 9.85 meters and a north/south axis of 9.8 meters. This corresponds nicely with the 10 meter average size for Lucayan houses recorded in the ethnohistoric literature, and was the value that Keegan used in his model. It yielded primarily Palmetto ware and a limited amount of imported ceramics that included two slipped sherds. There was also solid evidence for beadmaking in the form of blanks and abrading tools. The H structure is situated about 9 meters to the northeast of the G structure, further away from the plaza. It is smaller, with an east/west axis of 6.6 meters and a north/south axis of 6.15 meters. Evidently, there was no fixed Lucayan social norm concerning the "correct" house size. It also produced mostly Palmetto ware. Among the imported vessels were two slipped sherds, the Chican *adorno*, and a sherd with classic Chican designs. Unit H also produced the large volume of celt flakes that appeared to have been broken off through use.

In both the Meillacan phase and the Lucayan phase, there is an interesting difference between the assemblages recovered from the structures closer to the plaza and those from the structures more distant. Presumably, those structures that abutted the plaza (structures E and G) would have housed elite lineages, and those further away from the plaza (structures D and H), lineages of less social standing. There is some evidence supporting this hypothesis. First and

most notably, both the Unit E and Unit G materials include abundant evidence for beadmaking, whereas Units D and H did not. Second, Units D and H contain evidence of more pedestrian activities: the D structure includes the conch tool workshop, while the H structure includes the mass of broken greenstone celts, implying that woodworking (for tool handles, canoe paddles, etc.) or perhaps some other craft production took place there. No evidence for these sorts of activities was observed in Units E or G.

In terms of political economy, this situation makes some sense. Beads were *prima facie* status symbols. As such, it was socially appropriate for only certain members of society to display them. From this fact, it follows that the elite who would eventually use the beads would also be the ones who controlled their production, for if everyone could make beads for their own personal use, then the social value associated with these items is rapidly deflated. Our society is replete with similar hallmarks of prestige: if every car on the road were a Rolls Royce, then how special would it be to drive a Rolls Royce? Concomitantly, elite control over bead production would have enabled them to further enrich and empower themselves via trade with Hispaniola. All of the evidence suggests that bead exports were an important export for the Turks & Caicos residents. Maintaining control of bead production in the Turks & Caicos would assure that only elite lineages reaped the benefits of such trade. Even though beadmaking was likely controlled by the elite lineages, non-elite members of society also had some economic options. They could make a tidy living manufacturing goods like shell tools and perhaps worked wood for trade, but were denied the right to produce the most profitable and socially-charged items, with all of the attendant benefits.

In conclusion, Middleton is clearly a large and important site. However it cannot be properly understood unless one examines it in context with its sister site, Spud. After I discuss

that site, I will offer my interpretations of these sites' relationship with each other and their broader significance in Caicos Bank prehistory.

## **Spud**

### **Data**

#### **Physical description of Spud and Long Cay**

I described the physical nature of Long Cay in Chapter 2—The Caicos Bank Survey. There is no need to repeat that information here. Instead I will briefly describe where the site is located in relation to other sites and activity areas around South Caicos, and why this location was chosen for settlement.

#### **Description of Spud**

Spud is located on the northern third of Long Cay, 1.75 km southwest of Cockburn Harbour, South Caicos and 3.75 km east of Middleton. The site is roughly rectangular, with maximum dimensions that measure a tidy 100 meters by 50 meters (Figure 5-48). Because the northern half of Long Cay bends to the east, the long axis of the site is oriented on a southwest to northeast bearing, so that when one stands at Spud and faces the Caicos Bank, one is looking northwest. Unlike Middleton, Spud is elevated and has some topography. The southwestern tip of the site is the lowest, and it abuts a beach that varies between 3 and 8 meters wide depending on the tide. From here the site slopes upward to a fairly flat plateau that sits 2 to 3 meters above the high water line (Figure 5-49). Roughly half of the site is situated on this plateau. As one walks northeast along the beach, one observes a series of steep limestone ledges and abrupt slopes that form the seaward boundary of the site. While the limestone ledges have protected part of the site from wave action, unprotected portions of the deposit are eroding down the slopes toward the water. This gives the seaward boundary of the site a “toothy” appearance as eroded,

sloping gaps are interspersed with limestone ledges jutting directly into the water. We observed a considerable amount of cultural material at the base of these slopes, much of which was inundated at high tide. The opposite, southeastern boundary of the site is marked by a steep ridge that rises precipitously upward to an elevation of perhaps 40 meters. This is the limestone backbone of Long Cay, and it protects the plateau from the howling wind, punishing waves, and persistent salt spray that wafts in from the Columbus Passage on the other side of the island. As one moves northeast from the plateau the site rises, gently at first, but with an accelerating grade. The northeastern boundary of Spud is 10 to 12 meters above the southwestern beach. The surface scatter lightens as one moves upward, then abruptly terminates, presumably because the natural slope of the island simply made domestic activities too difficult. Beyond the site's northeastern boundary, it is an easy amble to the top of Long Cay's limestone bluff. The view from the apex is stunning, and one can see as far as Middle Caicos.

Long Cay is a big island and our surveys revealed that indigenous peoples visited a lot of it. Recall that we identified 4 activity areas on Long Cay in addition to the Spud site, one of which (LC-AA02) may have been a small settlement. Interestingly, all of these were south of Spud and located in environments that have better beaches, are flatter, and generally seem more conducive to settlement. Moreover, these areas are closer to Middleton Cay—as close as 2.5 km versus the 3.75 km to Spud. In the field, this made me wonder why Spud was located on the hilly, rocky, north end of the island, and what caused its residents to choose this seemingly inferior spot on Long Cay. After some reflection, I now believe I have the answer.

Spud and Middleton form a settlement pair, with Middleton the primary site and Spud the secondary. This implies that Spud was established sometime after Middleton as outlined at the beginning of this chapter. Because the decision to establish a new sister site was based upon

economic *and* social needs, it would have been necessary to locate the site in a place that was practical from both perspectives. Thus, the people of Middleton would have sought a location that not only maximized access to resources, but also made it possible to maintain social relations. Settling the north end of Long Cay enabled them to strike that balance.

One of the points of establishing a pair site is to expand and/or diversify the population's collective access to resources. In this case, that meant locating the site near resources that were not available at Middleton, such as reef and pelagic marine environments. This eliminated the center of Long Cay, where the marine environment is flat, shallow bank that is identical to that surrounding Middleton. The center of the Long Cay is several kilometers by canoe from the channels northeast and south of the island that allowed access to open water—in short, it would have required a much longer commute. Moreover, the center of the Long Cay is as close as 2.5 km from Middleton. The catchment of any site located there would have considerably overlapped that of Middleton, which defeats the purpose of establishing a sister site. Because the new settlement had to be located a sufficient distance from Middleton to minimize such overlap, Spud had to be situated elsewhere. Although the physical nature of the southern end of Long Cay is conducive to settlement, the northeastern portion of the island is more distant from Middleton and its primary catchment. This favors the northern end of Long Cay.

Not coincidentally, Spud is associated with the absolutely last stretch of beach on the northern third of the island. There is virtually no coastline from Spud to the northeastern end of Long Cay a kilometer away—only high escarpment that drops directly to the water. It simply is not possible to settle this kilometer of the island because there is no way to approach it. Thus Spud is as far away from Middleton as a Long Cay site can be. Concomitantly, it is also located as close to South Caicos, Dove Cay, and Big Cut (the channel that leads from of the Caicos Bank

to the open sea) as is possible. This makes sense, for South Caicos had arable land, wood for fires and structures, and probably fresh water, while the channel provided access to open water and those marine resources that do not occur on the bank. Thus, Spud is a carefully constructed compromise. Its location maximized access to resources, minimized catchment overlap, and facilitated social relations. It is located on an island within an island—a unique spot that satisfied specific needs, even if the landscape was somewhat less salubrious than other parts of Long Cay.

It is apparent that the residents of Middleton put much thought into the location of their sister settlement. Even more striking is the fact that the notion of establishing the new settlement on South Caicos did not seem to enter the equation. Why? Would it not make sense to locate a site directly on the big island and its resources? Is not South Caicos sufficiently distant from Middleton’s catchment and directly adjacent to Dove Cay and Big Cut? Yet the island was never intensively settled by residents of Middleton, or anyone else in prehistory for that matter. There are only three very small sites on South Caicos. At these “there is very little pottery or mollusk shell [and] little evidence of anthropogenic soils development”, which suggests that “these sites may have been temporary camps or procurement areas” (Keegan et al. 1994:13). These sites are outposts or pot drops that were peripheral to the primary regional settlements. People simply did not live on South Caicos, electing instead to intensively settle the small cays to its south and west. This fact speaks to the significance of small cay environments in indigenous settlement patterns, which I discuss in detail in the last chapter of this dissertation.

### **Excavation details**

We completed a total of 9 excavation units of various sizes, lettered A through I (Figure 5-50). Units A, B, E and F were 1 meter square. Unit C was 2 meters square, and Units D, G, H,

and I were 50 x 50 cm test units. We began on the first day with Units A and B. Unit A was situated in an area of dense surface scatter and very dark soils adjacent to a limestone ledge near the seaward boundary of the site. Unit B was located in a similar context, but about 15 meters closer to the beach at the site's southwestern side. Both of these Units yielded little material in the upper layers, which were dominated by dark, ashy soils, burned and cracked conch shell, and innumerable rocks. This fill appeared to have been intentionally deposited in an effort to level the seaward portion of the site, which was eroded and slopes considerably in places. In both cases, but particularly in Unit B, we found a rich deposit underlying this fill. The bounty of cultural and faunal material in these lower layers led me to open the 2 x 2 Unit C adjacent to Unit B. Like its neighbor, it produced little in the upper levels, but a rich cultural deposit below the fill that persisted right to bedrock. Unit D was a 50 x 50 test unit designed to examine the constitution of the site's interior. Here we did not observe the sterile fill noted in Units A-C. Rather, Unit D produced a wealth of material from the surface to bedrock. To further explore this feature, I placed the 1 x 1 meter Unit E one meter southwest of Unit D. Unit E was equally productive, so I opened another 1 x 1 designated Unit F directly to its east so that together, Units E and F formed a 1 x 2. Meanwhile, I directed that additional 50 x 50 test units be placed further to the east, up the hill, to sample that part of the site. We did not establish a formal transect here, but tied the test units into each other so that a rough grid pattern was formed. We were able to complete three test units, G, H, and I. Unit G was established first in an area of denser surface scatter, some 15 meters southeast of Unit A. It produced a bounty of cultural material, comparable in volume to Units D, E, and F. Unit H was positioned further up the hill, 8 meters due east of Unit G. It was less productive than G, but still yielded enough cultural material to demonstrate that the deposit extends that far. Unit I was located 8 meters south of Unit G,

toward the ridge. It contained little cultural material and was comprised mostly of the fill of dark soils and plentiful rocks that we observed in Units A-C. Overall, our test units provided quite a bit of information about the extent of the deposit. They indicate that Spud's deposit is at least 20 meters square.

All units except Unit G were excavated by trowel and brush to bedrock or sterile soil. Unit G was closed prior to bedrock because we ran out of time. All matrix was screened through  $\frac{1}{4}$  inch hardware cloth mesh. The excavations produced 32 FS proveniences. Each FS provenience for Units A, B, C, E, and F corresponds to an arbitrary 10 cm stratigraphic level. Units A and B produced 4 Levels, Units C and E 5 Levels, and Unit F a remarkable 7 levels. The test units D, G, H, and I were all given a single FS provenience. These test units were deep, terminating between 43 and 52 cm below the surface. Although the site does slope toward the sea, the grade is gradual and no unit was placed on a severe slope. Thus, the deposits at Spud appear to be deeper than at any other site we excavated. This suggests a prolonged period of occupation. It also reflects patterns of waste disposal that differ from those we observed at Middleton. Spud has no fossil midden. If the residents were disposing their garbage on the beach, it apparently was washed away before any lithification took place. In any event, this was good news for the archaeologists, since the deposit at Spud is far better preserved than at its sister site on the horizon.

## **Results**

### **The ceramic assemblage**

**Overview.** We collected ceramics from both the surface and subsurface deposits at Spud. The combined ceramic assemblage from Spud consists of 300 sherds weighing a total of 1,551 grams (Table 5-3). Of these, 51 sherds weighing a combined 544 grams were obtained in

the surface collection. This was not a scientific collection, so I exclude the surface ceramics from this statistical analysis. This results in an assemblage of 249 sherds weighing a total of 1,007 grams. For the surface collection, I will only discuss the diagnostic sherds we recovered, because these offer valuable insight into who was living at the site and when.

In the subsurface deposits, Palmetto ware was more common than imported ceramics, accounting for 73.9% of the total assemblage by sherd count (Figure 5-51) but only 59.6% of the total assemblage by weight (Figure 5-52). This indicates that there is some bias in these numbers. The sherd count ratio is skewed by an abundance of small Palmetto ware sherds. The reader will recall that Middleton assemblage was similarly skewed (but in that case by an abundance of small imported sherds), and that I focused on the overall distribution of the ceramic assemblage by weight to address this bias. I will use the same strategy here, but will also use sherd count when speaking of particular units and features.

**Vertical distribution.** The vertical distribution analysis includes all 249 of the sherds recovered from the subsurface deposits at Spud. Every Unit A-I produced ceramics (Figure 5-53). Units E and F, which were positioned to form a single 1 x 2, accounted for more of the ceramic material, by both sherd count and weight, than any other unit. Unit C was the next most productive, which is logical as it was the only 2 x 2 meter unit we excavated at the site. Interestingly, the small 50 x 50 cm Unit G was also quite productive, given its size and the fact that we did not have time to complete it to bedrock. I discuss the specifics of the ceramics recovered from these and every other unit in turn below.

Unit A was located near the water, a few meters back from a part of the deposit that was eroding toward the sea, and in an area of dark soils and a robust scatter of broken mollusk shells and fire cracked rock. Only 5 sherds weighing 40 grams were recovered from this 1 x 1 meter

unit, yet two of these were highly decorated. The first is a shoulder sherd with a punctated lug and engraved line executed in the Chican style. The second decorated sherd is from either the shoulder or the flaring neck of a jar, and displayed two rows of large round punctations. These alone are not diagnostic, and the sherd could be either Meillacan or Chican. Unit B was positioned southwest of Unit A, adjacent to a limestone ledge near the beach at the southwestern tip of the site. It also produced 5 imported sherds, weighing 63 grams, plus a single small piece of Palmetto ware. Two of the imported sherds are decorated. The first is a large punctated Meillacan sherd, with impressions that were smoothed over while the clay was still wet. The second sherd is enigmatic but may have been part of an effigy vessel. It includes a flat lug decorated with what may be an eye (Figure 5-54). It may be Chican given its orange-brown paste, but there is not enough of it to be certain. The big 2 x 2 Unit C was situated adjacent to Unit B and produced 55 sherds weighing 293 grams. Imports account for 14 sherds, and Palmetto ware the remaining 41. None of the sherds recovered from this unit was decorated, but one imported sherd had an unusual light gray paste and a sand temper that differs from the typical Meillacan and Chican clays. We also observed one undecorated wedge-topped imported rim and a flat-topped Palmetto ware rim. Units E and F were located inland from Units B and C and formed a 1 x 2, so it is appropriate to discuss them together. These units combined to produce the lion's share of the subsurface ceramic assemblage, yielding 35 imported sherds weighing 168 grams and 112 pieces of Palmetto Ware weighing 317 grams. Four of the imported sherds are decorated, and two of these are rims. The first decorated body sherd is a tiny fragment that bears the white slip associated with bottles of the Chican style (Figure 5-55). The second has a single row of large triangular punctations on the inturned shoulder that appear to have been produced by angling a large stylus downward into the clay. Because punctations are

common to both Meillacan and Chican ceramics, it is not possible to classify this sherd on this basis. The first decorated rim has a bevel top and features a cutting, incised line directly beneath the lip. It is probably Meillacan given the cutting execution of the incised line, but the sherd is too small to be certain. However, the second decorated rim is an everted, round-top piece that features a series of pear-shaped punctations on an externally applied strip (Figure 5-56). This piece is certainly Meillacan (see Rouse 1939:Plate 5, image 14 and the accompanying description on page 202 of that volume for a comparable Meillacan sherd). All of the Palmetto ware was undecorated but includes three rims, one each with a flat top, a flat-bevel top, and a bevel top. We also identified a sherd with the chalky, pale-orange paste associated with Chican bottles.

The four 50 x 50 test units also produced ceramics. Of these, Unit G was by far the most productive. Its assemblage is dominated by Palmetto ware, which accounted for 33 sherds weighing 63 grams, whereas only 2 plain imported body sherds weighing 17 grams were recovered. Most of the Palmetto ware is small and fragmentary, but a single large rim sherd with a flat top was identified. The exterior lip of the rim was rough, because the potter did not smooth the exterior surface of the vessel after he or she had flattened the rim top. None of the remaining test units was very productive. Unit D yielded 3 small, plain imported body sherds and 4 small Palmetto body sherds. Unit H produced no imported pottery and only 8 small Palmetto body sherds. Unit I was largely acultural, and contained only 1 small, plain, imported body sherd. Although these units did not produce anything very interesting, that data was helpful in forming a general hypothesis about how Spud was laid out, which I discuss in the ceramic assemblage Analysis section below.

Although the surface collection is not included in the statistical analysis it is appropriate to discuss its notable sherds at this time. Among the 28 imported sherds are 3 plain rims, a decorated rim, 3 decorated body sherds, a Chican lug, and a single chalky, pale orange Chican bottle sherd. One of the plain rims appears to have come from a small, extremely thin and finely made shallow bowl. The other plain rims have a rounded top and a flat top. The decorated rim was part of a navicular vessel, and bears a row of punctations. Although this alone is undiagnostic, it is probably Meillacan, for it has a very dark paste and felsic inclusions. Two of the 3 decorated sherds are also punctated, and are possibly Chican given their orange-tan paste. The third is definitely Meillacan, for it bears the classic wet-clay crosshatch motif associated with that style. None of the Palmetto ware was decorated, but we did recover some large pieces. The biggest was a griddle sherd weighing 113 grams that had eroded out of the deposit and was found on the beach. It was the only griddle sherd we recovered at the site, and testifies that manioc was part of the diet at Spud.

**Horizontal distribution.** The horizontal distribution includes the ceramics recovered from Units A, B, C, E, and F. Recall that Test Units D, G, H, and I were assigned a single FS provenience each. Because we did not collect specific depth data for these, it is not possible to include them in the horizontal analysis. As it turns out this is not problematic, for these units contributed only 36 of the 249 sherds we recovered from the subsurface deposits.

Ceramics were recovered in Levels 1 through 5. Although some units went into Levels 6 and 7, no ceramics were recovered in those contexts. Of the five ceramic bearing levels, Level 3 was the most productive in terms of ceramic weight (Figure 5-57). Level 3 is also dominated by Palmetto ware and is the point at which the ceramic assemblage transitions from a majority of imported ceramics in the lower Levels to a majority of Palmetto ware in the upper Levels. Both

imported and domestically-manufactured ceramics occur throughout the deposit, but overall, the data indicate that Palmetto ware became more common at the site over time.

Examining the horizontal provenience of diagnostically decorated sherds also sheds light on this transition. Let us begin at the bottom, with Level 5. The white slipped Chican beer bottle sherd (Figure 5-55) and the Meillacan rim (Figure 5-56) were recovered in Level 5 of the 1 x 2 formed by Units E and F. The possible Chican effigy vessel with its “eye” was recovered in Level 4 of Unit B. Level 3 of Units A and B produced the punctated, red-slipped Meillacan neck sherd and the Meillacan sherd with the smoothed-over punctations, respectively. Finally, Level 1 of Unit A yielded the classic Chican lug. From this, we see that diagnostically Meillacan ceramics predominantly underlay Chican ceramics, although there is some admixture. This could reflect cultural behavior, in which ceramics used at the site transitioned as Meillacan ceramics were phased out in Hispaniola. Alternatively, it could be the result of bioturbation from iguana or land crab burrows, or some other animal activity. In any case, it is significant that Meillacan ceramics are not found above Level 3, which is the point at which the assemblage transitions to be dominated by Palmetto ware and all the diagnostic imports are Chican. This generally corresponds to what is known about regional ceramic timelines, and suggests that the jump from Meillacan to Chican was not an abrupt break, but was effected over a period of time, as archaeologists in the post-Rouse era have increasingly come to appreciate.

**Analysis.** As an extension of Middleton, Spud was first established by Meillacan-affiliated peoples. Later, the residents increasingly incorporated imported Chican vessels as these forms gradually replaced Meillacan ceramics in Hispaniola. But as we also observed at Middleton, some Palmetto ware was incorporated into the Spud ceramic assemblage from the beginning. This quite likely occurred for the same reasons as at Middleton, which I discussed

earlier in this chapter. Still, there is a clear shift in the frequencies of ceramic types at Spud that parallel those observed at its sister site. Overall, the similarities between the two sites' ceramic assemblages support the argument that Spud and Middleton were paired settlements that enjoyed close social and economic ties throughout their existence.

At Spud, the lowest Levels 4 and 5 of the deposit contain a higher percentage of imported ceramics than do the upper three Levels. Moreover, the decorated imported sherds recovered from Levels 4 and 5 are predominantly Meillacan. This horizon clearly corresponds to the Meillacan phase observed at Middleton. The middle Level 3 is a transitional phase where imported ceramics first become outnumbered by Palmetto ware, presumably as this local ceramic style became more widely available. Here we also observed a transition among the imported ceramics from predominantly Meillacan to a mixed Meillacan/Chican assemblage. The uppermost Levels 1 and 2 contain primarily Palmetto ware, with lower percentages of imported Chican ceramics and no Meillacan ceramics whatsoever. As such, this upper horizon neatly matches the Lucayan phase occupation of Middleton. Interestingly, this evidence also bolsters the larger regional argument that the transition from one imported ceramic style to the next was effected gradually. The data from Spud corroborates other evidence from both the Turks & Caicos and Hispaniola that indicates both Meillacan and Chican styles coexisted for a period of time around the 13<sup>th</sup> century AD (Keegan 2000:150-151). Additionally, the gradual transition between ceramic styles observed at Spud suggests that the site, unlike Middleton, was not abandoned for a protracted period of time. This raises some interesting questions about the relationship between the two sites that will be explored at the end of the chapter.

Unfortunately, the ceramic data do not provide a comprehensive view of how the site was spatially organized. Still, it is possible to formulate a general hypothesis from the ceramic

record. First, it does appear that a large portion of the site nearest the beach (hereafter referred to as the “seaward” section of the site) was filled by burning rock and conch shell in large fires. The upper Levels of Units A, B, and C all exhibited this feature, which overlays the earlier Meillacan phase deposit and indicates that the Lucayan phase residents were responsible for this activity. Behind this area, toward the interior of the site where Units D, E, F, and G were situated (hereafter the “interior” of the site), lay a productive deposit that yielded a great deal of cultural and faunal material throughout both the Meillacan phase and the Lucayan phase. Behind this feature, even further back from the beach where Unit I was located (hereafter the “ridgeward” portion of the site), the site also appears to have been leveled with fill that included very little subsurface cultural material. Admittedly, this assertion is based on data from this single 50 x 50 cm Test Unit and is far from conclusive, but it suggests that this area of the site may have been a central common area, or perhaps the location of housing. Unfortunately we did not identify any potential structures during our brief visit so this is little more than speculation. Moreover, there is no way to determine when this area was constructed, or by whom. I now turn to the faunal record, which, fortunately, offers better insight into Spud’s spatial organization over time.

### **The faunal assemblage**

**Vertebrates.** Spud’s deposits are well preserved, and we recovered vertebrate faunal material from 28 of the 30 subsurface proveniences. My field notes are replete with observations on what emerged from the screens, such as “Finding faunal materials right on the bedrock in A and B. Lots of good fish bones.”; “Unit D has lots of faunal materials including a large iguana vert.”; and “Unit E yielded faunal material including shark and iguana and many fish.” A full

analysis of the material has not been completed, so all we can infer from these simple field notes is that pelagic fish and iguana were captured.

**Invertebrates.** The invertebrate faunal assemblage was analyzed and provides interesting clues as to how the site was occupied over time. It consists of 13 taxa and includes 9 mollusks, 3 corals, and a trace amount of the West Indian Fuzzy Chiton (Table 5-4). The queen conch (*Strombus gigas*) was the most common mollusk. We collected 106 individuals, of which 76 were unmodified and 33 fashioned into a variety of shell tool forms. Most of these (n=21) were picks of various sizes, although we also identified 7 small conch “knippers” that are thought to be related to bead production (Carlson 1993, Jones O’Day and Keegan 2001:285-286) and three nicely made conch-lip celts. We also recorded an impressive 111 liters of cracked and broken conch. The second most abundant invertebrate was the West Indian Topsnail (*Cittarium pica*) with an MNI of 51. This mollusk is easily collected from the rocky intertidals, and we observed a healthy population of them on the rocks around Spud at low water. The remaining 7 taxa of mollusk are small creatures and occurred in limited amounts. These include 4 specimens of *Oliva* sp., two of which were modified into beads, and 7 specimens of *Olivella* sp., one of which was modified into a bead. We also identified 4 specimens of unmodified *Chama sarda*, the mollusk that was prized as a raw material for beadmaking. The remaining 4 taxa of mollusk are intriguing because we did not identify these species at any other site we excavated. We identified one specimen each of *Purpura patula*, *Bursa corrugata*, and *Astrea americana*, and two specimens of *Cypraea zebra*. All of these creatures inhabit either shallow or intertidal water (Abbot and Morris 1995) and would likely have been collected from the bank. Finally, we identified 3 species of coral in the assemblage. We recovered 247 grams of *Acropora cervicornis* or Stag’s Horn coral, including 10 individual pieces that showed evidence of use

wear. We also identified 214 grams of star corals (*Monastrea* sp.) and 487 grams of brain coral (*Diploria* sp.). Most of the brain coral was found in the form of a single coral head about the size of a cantaloupe that emerged from Unit G.

**Analysis.** The spatial distribution of the invertebrate faunal material amplifies and refines the general hypothesis of site layout I described in the ceramic assemblage analysis section above. It also demonstrates that different areas of the site were used differently in the Meillacan phase and the Lucayan phase. I will discuss the evidence for each of the seaward, interior, and ridgeward areas of the site in turn below.

The seaward portion of the site, where Units A, B, and C were located, yielded almost all of the 111 liters of burnt, cracked conch, 63 of the 76 intact/unmodified conch, and 49 of the 51 topsnail shells we recovered at the site. However, there is a distinct change in the distribution of these materials between the Meillacan phase and the Lucayan phase. Let us begin at the bottom, with the Meillacan phase. Most of the intact conch (54 of the 63 recovered from this area) and topsnail shells (46 of the 49 recovered from this area) were obtained in the lowest 3 Levels. The Meillacan phase Levels also produced more conch tools and tool pieces than the upper strata, including 2 very small picks (<3 cm from tip to tip) that may have been employed as knippers, a conch-lip celt, and a hoe. As discussed above in the ceramic analysis section, the Meillacan phase Levels of the seaward area also yielded more ceramic material than the Lucayan phase horizon in this area. From these facts, it seems as if the seaward portion of the site was a midden/waste disposal area during the Meillacan phase. However, the Lucayan phase strata suggest that this area was used differently during that period. Here the deposit is marked by a large volume of burned and cracked conch pieces, most of the unmodified *Solenastrea* and *Diploria* coral pieces, and innumerable rocks, with very few intact mollusk shells and little

ceramic or other cultural material. However, 4 of the site's 10 *Acropora cervicornis* abraders were recovered in this context. Because we also identified some broken conch picks in these Lucayan phase Levels, it is possible that they discarded these and the used abraders into the fill once these tools were worn out. Overall, the fill may have been intentionally positioned here to level this area, which does slope precipitously toward the water in places. If so, it could have been used as a common area, or perhaps the newly-flattened surface was deemed suitable for situating houses. In any case, it does not appear that the seaward area of Spud was primarily used for waste disposal in the Lucayan phase.

About 10 meters toward the south sits the interior portion of the site, where Units D, E, and F were situated. Here there were far fewer intact conch ( $n=13$ ) and topsnail shells ( $n=2$ ), but again, these were not distributed evenly between the Meillacan phase and the Lucayan phase deposits. In the Meillacan phase, we identified 9 of the 13 conch and both of the topsnails. The Meillacan phase deposits also yielded the lion's share of the rest of the mollusk assemblage, including 2 of the 4 *Oliva* sp. (both were beads), all 7 of the *Olivella* sp., 5 of the 6 MNI of *Chama sarda*, both specimens of *Cypraea zebra*, and the single specimens of both *Purpura patula* and *Bursa corregata*. Moreover, we found 7 broken pick tips/knippers in context with these other mollusks, as well as 3 *Acropora cervicornis* abraders. All of these materials were recovered in Levels 4-7 of the 1 x 2 formed by Units E and F.

The presence of several uncommon mollusks in the Meillacan phase of the interior portion of the site poses an interesting question: How were they using these mollusks? All of these are small creatures no more than a few inches in length. Their small size, fragmentary nature, and the fact that few specimens were recovered suggests that these were not captured as food items. Rather, these mollusks may have been desired for their pretty shells or other

interesting properties. For example, the Wide-Mouthed Purpura mollusk (*Purpura patula*) may have been collected for use as a colorant. The animal “Gives off a permanent purple dye” (Abbot and Morris 1995:215) that possibly could have been employed as a body decoration. Such practice was common in the Bahamas and was executed in a variety of forms. In his first description of the Lucayans in the *Diario* on October 12, 1492, Columbus noted “some of them paint themselves with white, and some of them with red, and some of them with whatever they find. And some of them paint their faces, and some of them the whole body, and some of them only the eyes, and some of them only the nose” (Dunn and Kelley 1989:67). Although Columbus does not specifically mention purple body art, this mode could fall under “whatever they find,” particularly on a resource-deficient small cay where pigments from terrestrial sources would have been more scarce. Alternatively, the dye could have been used to color the cotton “shorts” or loincloths that women wore (Dunn and Kelley 1989:91,255,271), although Columbus did not comment on the color of these garments. The remaining two mollusks feature shells with a range of colors that could have been attractive to Spud’s beadmakers. The Measled Cowrie (*Cypraea zebra*) sports a “purplish brown” shell, and the Gaudy Frog-shell (*Bursa corrugata*) a “yellowish brown” shell (Abbot and Morris 1995:141,194). Perhaps the beadmakers sought to add a little variety to their trade by expanding the range of bead colors. It would be interesting to have a malacologist examine the beads and bead blanks recovered from Spud and other Bahamian sites to determine if these species were actually employed in that manner. Alternatively, these colored mollusks could have been captured for manufacture into fishing lures. The residents of Spud certainly had ample need for such implements, given that one of the primary reasons they were there was to harvest fish from open water. In particular, the Measled Cowrie “could have been used as an octopus lure” (William Keegan, personal communication).

2009). Hopefully future excavations will yield more concrete evidence of this behavior, although we did discover one potential fishing implement that I discuss shortly.

In contrast to the Meillacan phase, the Lucayan phase of the interior portion of Spud is largely devoid of invertebrate faunal material. As I noted in my field journal: “All of Units D and E and F had far less than 1 liter of crushed conch and very few rocks as well. It must have been cleared of these things.” Beyond that, we only identified an *Acropora cervicornis* abrader and a single piece of a *Chama sarda* shell. Although this portion of the deposit was rich in vertebrate faunal material, it appears as if the Lucayan phase residents were disposing of their mollusk shells elsewhere, probably in the seaward fill area, given the enormous volume of material associated with the Lucayan phase there. This situation is puzzling, for I cannot think of a reason one would dispose fish bones in one area and mollusk shell in another. Unfortunately, the limited data from this provenience do nothing to resolve this issue, and are mute as to how the interior portion of Spud was used in the Lucayan phase.

Test Units G and H were also situated in the interior portion of the site. These were designed only to test the extent of the deposit and were not broken out by Level, so it is not possible to view the data from these in terms of the Meillacan phase and the Lucayan phase. However, we discovered that Unit G was quite productive, and thus was still situated on the main deposit. Unit H was less productive and apparently more on the deposit’s periphery. The most notable invertebrate fauna from Unit G consisted of the American Star-shell (*Astrea americana*) mollusk, which is colored like the other unusual creatures from the interior portion, but in this case with a “greenish” hue (Abbot and Morris 1995:204). This Unit also produced the large brain coral head. Interestingly, it was recovered in context with a possible beadmaking platform: a large, flat, smooth rock that had a central depression worn into it. The brain coral could have

been used to round the drilled blanks by repeatedly dragging a string of them back and forth over its surface. I will discuss Spud's remarkable beadmaking enterprise in detail shortly.

Little can be said about how the ridgeward portion of the site was used. Recall that time constraints precluded us from excavating anything more than a single 50 x 50 cm test unit (Unit I) in this area. The matrix in this Unit was very different from that of the other 50 x 50 Test Units and appeared similar to that of the Lucayan phase fill in the seaward portion of the site. As I noted in my field journal: "Unit I has much darker soil and is very rocky compared to the other 50 x 50s... [It] is full of dark soil, rocks, and burned and cracked conch just like the early layers of A-C." It appears that the ridgeward portion of the site does not include much of a cultural subsurface deposit, although clearly, one small test unit does not make that assertion unassailable. If Spud's residents were filling in this area, what they did with it afterward remains a mystery. Any meaningful insight into how this portion of the site was used will depend on future research.

### **Other cultural material**

**Beads.** We recovered more evidence for beadmaking here at Spud than at any other site we excavated during the entire field school. We recovered 55 total beads and bead blanks (Figure 5-58). The majority, 46, were disk-shaped blanks. Six of the blanks were drilled, but none had been rounded or completely finished. Of the 46 disk blanks, 31 were manufactured from "the thin lip of a young adult *Strombus gigas*" (William Keegan, personal communication 2009). These blanks are creamy-white, and retain a sheen, but not the pink color, of the original material. Nine blanks were made of the bright red *Chama sarda* mollusk and one from a brownish shell that may have been a Measled Cowrie or perhaps a Triton's Trumpet. The remaining four disk-shaped blanks were crafted from an unknown material. Of the nine other

types of beads, we identified 4 *Olivella* beads, 3 *Oliva* beads, a single bead made from the drilled shell of a small, unidentified conical mollusk. However, this item was double-drilled, so it could also be a fishing lure or net weight. We also recovered a double-drilled, semi-circular fragment crafted from what appears to be *Cittarium pica*. It may be part of a pendant, although Keegan (personal communication 2009) suggested it could also be a fishing lure. It does appear to have been polished to a high sheen, which would bolster his argument.

Because the beads were found all across the site, it is useful to discuss them provenience by provenience. The seaward area of the site that included Units A, B, and C yielded 8 beads: 5 round blanks, 2 *Oliva* beads, and the double-drilled item that is either a pendant or a fishing lure. Unit A produced a single item: the double-drilled item, in Level 4. It had been partially charred, perhaps by the heat generated by the fires that were used to reduce the conch shell and rocks and create the fill in the upper levels of the seaward area. Unit B yielded a single round blank in Level 3. Unit C produced a round blank and *Oliva* bead in Level 1, a round blank in Level 3, and 2 round blanks and an *Oliva* bead in Level 5.

The lion's share of beads was identified in the interior portion of the site, primarily in the 1 x 2 formed by Units E and F. Here, beads were identified in every Level 1-6. For the combined 1 x 2, Level 1 produced 2 round blanks. Level 2 yielded 8 round blanks and an *Olivella* bead. Interesting, 4 of the 6 drilled beads we recovered from the whole site were among the 8 round blanks identified in this provenience. Level 3 produced one round blank and an *Olivella* bead. Level 4 was the most productive of all proveniences at the site, and produced 12 round blanks, the drilled unidentified-to-species (hereafter UID) conical shell bead, an *Oliva* bead, an *Olivella* bead, and 4 unmodified *Olivella* shells. Level 4 was also highly productive, yielding 13 round blanks (2 of which were drilled), and an unmodified *Olivella* shell. Finally,

Level 6 produced 3 round blanks. Three other blanks were recovered in the interior area from Test Units G and H. Unit G produced a single *Olivella* bead, as well as the large brain coral boulder and the possible beadmaking platform discussed earlier. Unit H accounted for the remaining 2 round blanks. Because the Test Units were not broken out by Level there is no further provenience for these items. No beadmaking evidence was recovered from the rideward portion of the site, but again, we only excavated the single 50 x 50 cm Test Unit I in this area.

**Analysis.** Although beadmaking activity seems to have permeated the site there are clear trends in the data. First, it is apparent that beadmaking activities were most commonly executed in the interior of the site, where 47 of the 55 beads and blanks were identified. Second, beadmaking activities seem concentrated in the Meillacan phase strata of the deposit, from Level 4 downward. Of the 52 beads that have depth provenience data, we identified 35 beads and blanks from the Meillacan phase strata, compared to only 13 in the Lucayan phase strata. Interestingly, only 4 beads and blanks were recovered in the transitional Level 3. Even if these are aggregated into the Lucayan phase figures, beads and blanks from the Meillacan phase deposit still outnumber those from the Lucayan phase deposits by more than 2 to 1. Although these numbers are compelling, it is prudent to remember that our limited excavations hardly remove the possibility of sample bias. Future excavations that include fine-screen analysis of all matrix will refine our understanding of how beadmaking activities were distributed at Spud across time and space. For the purposes of this dissertation, it is enough to appreciate that Spud had a dedicated beadmaking industry throughout its existence, which may have been more prevalent earlier in the site's history.

The data indicate that both the Meillacan phase and the Lucayan phase residents of Spud had an active beadmaking industry, undoubtedly for all of the reasons discussed earlier in this

dissertation. The question is, who controlled it, and how did it factor into Spud's relationship with its sister site at Middleton? Assuming that Spud was the secondary site in the settlement pair, it is hardly conceivable that the chief and his elite lineage at Middleton would have permitted everyone at Spud to independently make so many beads for their own purposes. Such behavior would not only undermine the Middleton chief's power base, but also cut heavily into his profits from trade in beads with Hispaniola. There are three possible ways the Middleton chief could prevent this. First, Spud may have had a secondary chief, allied via blood or marriage to the Middleton chief, to control bead manufacture on his behalf. Appointing a trusted relative to oversee beadmaking activities would ensure that the Middleton elites controlled the bead trade. Second, there could have been a system of tribute, in which the secondary chief and the residents of Spud were obliged to produce some quantity of beads for delivery to the elites at Middleton. Perhaps the secondary chief was entitled to any surplus, perhaps not, but in any case, a quota system would have placed limits on the amount of beads, and thus economic and social power, that the residents of Spud could accumulate. William Keegan (personal communication 2009) proposed the final alternative. Given the site's smaller size, he suspects the site was semi-permanently occupied and that elites were not in permanent residence. In his scenario, "Craftsmen and fishermen would go to Spud, perhaps under the leadership of an elite [from Middleton], and perform productive tasks." They would visit when the fishing in the channel and open water was good, and to make beads during slower times. Even though decorated ceramics and other items associated with status (see the "Lithics" section below) were identified at Spud, these "served to reinforce the significance of their activities" but cannot conclusively prove the presence of a permanent elite. By way of comparison, he mentions the Governor's Beach site on Grand Turk and the Clifton site on New Providence in the Bahamas. As the reader

will recall, Governor's Beach was a seasonal beadmaking site, but it yielded items associated with elites: an exotic porcupine-fish effigy vessel, a bat effigy vessel, and Triton's Trumpet shell horn (Keegan 2007:89-90). The Clifton site likewise produced evidence of status items via a high frequency of decorated ceramics. It too was only occupied seasonally, possibly in the summer months, over a period of perhaps as much as 300 years (Vernon 2008). Certainly, Spud could fit this profile. However, the presence of a large griddle sherd at Spud suggests that the population was more demographically diverse (i.e. there were women there cooking manioc) than either Governor's Beach or Clifton, which are thought to have been settled only by men (Keegan 2007:88, Vernon 2008:34-35). If Spud is a seasonal or semi-permanent settlement, it was on a larger scale that included adults of both sexes, and probably some children as well. Because a fuller range of domestic activities occurred at Spud, it is more complex than a simple beadmaking or fishing outpost. As such, it still fits into the settlement pairing model described at the beginning of the chapter.

**Lithics.** We recovered three items produced from exotic, imported stone. Two are related to bead production (Figure 5-59), and were identified in the Lucayan phase Levels of the 1 x 2 formed by Units E and F. The first item is a single pink-chert flake from Unit E, Level 1. The second is a chert core, from which small chert flakes had clearly been removed, that was identified in Unit F, Level 2. As discussed in the Middleton section above, small chert flakes were used in manioc graters and as drill bits to perforate bead blanks. Given their association with the many beads recovered from the Lucayan phase of Units E and F it seems logical that this material was used in a beadmaking capacity.

The third stone item is one of the more spectacular artifacts we recovered during the entire field school. This small cemi is carved from Hispaniolan greenstone, and depicts a

stylized human face (Figures 4-60 and 4-61). The shape of the eyes and mouth, and the clearly depicted ear spools, indicate a Classic Taino affiliation. It measures 8 cm by 8 cm, and its obverse is smooth and concave. Unfortunately there is no provenience data for the cemi. During a lunch break, I discovered the cemi partially buried in the sand on the beach in the intertidal. It was situated directly adjacent to an eroded area of the seaward portion of the site near Unit A, and apparently had eroded out of the nearby deposit. It had been on the beach for some time, since there were a number of calcite accretions on the item.

A cursory comparison to several representations on effigy vessels and carved stone artifacts from Puerto Rico and the Dominican Republic reveals some similarities (Alegria 1997:30; Arrom 1997:49-50; Roe 1997:104), so the image depicted on the item may represent one of the Tainos' mythical deities. However, it seems most like the carved stone *guaizas* described by Oliver (2009). A guaiza was a prominent exchange item used to symbolize alliances among Taino elites. According to Oliver “[G]uaizas were highly visible gifts in alliance formations” and were “uniquely singled out as *the* item to be gifted to strangers and foreign caciques” (2009:155-156, emphasis his). Although the cemi is clearly an important discovery, a detailed analysis of its iconography, how it was used at Spud, and what it tells us about the broader relationship between the Lucayans and the Classic Taino is beyond the scope of this project. Still, the cemi provides *prima facie* evidence for an elite presence at Spud, even if it was impermanent. Moreover, it testifies to ongoing contact between the Turks & Caicos settlements and the classic Taino chiefdoms of Hispaniola, and suggests a strong cultural link between the two areas that included a shared worldview. I will explore this matter in greater detail in a future publication.

## Radiocarbon chronology

Three radiocarbon dates were obtained from Spud. All three were obtained from charcoal samples that were specifically selected to establish the chronology of a particular provenience. All samples were submitted to Beta Analytic for AMS analysis, and all were calibrated.

The first sample was collected from Unit E, Level 6. This provenience is at the bottom of the Meillacan phase occupation in the interior portion of the site. I selected it because the charcoal lay below the lowest Meillacan ceramics we identified at the site, in an ashy layer directly atop sterile sand. My objective in selecting this date was to establish the time that the Meillacan phase commenced. It was assigned designation Beta 242672. The intercept of the radiocarbon age with calibration curve occurred at Cal AD 1160 +/- 40, with a two-sigma range of Cal AD 1030 to 1220 (Appendix C).

The second sample was collected from Unit E, Level 5, which lay directly above the provenience for the first sample. It was situated in the same provenience as the Meillacan rim (Figure 5-56) in Level 5 of Unit E and was directly adjacent to the white slipped Chican beer bottle sherd in Unit F, Level 5. I specifically selected this sample to further date the Meillacan phase deposit. It was also associated with 3 MNI of *Cittarium pica*, a large conch pick, a small conch-lip adze, and 6 bead blanks executed from *Chama sarda*, conch, and several UID materials. It was assigned designation Beta 242671. For this sample, the radiocarbon age intercepted with the calibration curve at three points: Cal AD 1320 +/- 40, Cal AD 1350 +/- 40, and Cal AD 1390 +/- 40, with a two-sigma range of Cal AD 1290 to 1420 (Appendix C).

The third charcoal sample was collected from the very bottom of Unit A, Level 4, where it lay directly on the bedrock. This Level included 17 intact conch, 3 conch picks, 10 *Cittarium*

*pica* shells, and one medium, undecorated, imported body sherd of unknown classification. However, a Chican lug was recovered from Level 1 of this Unit. Although the charcoal itself was not associated with any diagnostic material, the fact that it was situated on the bedrock suggests that it represents the beginning of this part of the settlement. It was assigned designation Beta 242670. The intercept of the radiocarbon age with the calibration curve occurred only once at Cal AD 1290 +/- 40, but the calibration of the two-sigma range yielded two possible date ranges, Cal AD 1260 to 1320 and Cal AD 1350-1390 (Appendix C).

**Analysis.** The radiocarbon dates obtained from Spud are intriguing, and in addition to formulating a local chronology, may even have some broader regional significance. The most obvious conclusion one can draw from Spud's dates is that it and Middleton were occupied at the same time, beginning in the 12<sup>th</sup> century AD, and persisted for at least two centuries thereafter. This was predicted by the theoretical argument concerning settlement pairs, and is in line with the excavated data that shows much similarity between the material culture of Middleton and Spud, first in the Meillacan phase, and later in the Lucayan phase.

The first sample obtained from Unit E, Level 6 was dated to AD 1160 with a range of AD 1030 to 1220. This is nearly identical to the earliest date obtained from Middleton, which was AD 1160 with a range of AD 1040 to 1260. Remarkably, these dates also mesh perfectly with one I obtained from the Meillacan-era beadmaking site of MC-8/MC-10 on the south coast of Middle Caicos in the course of my Master's Thesis research. That sample of charcoal was also chosen "because its provenience at the bottom of one of the deepest and most productive units seemed to represent the earliest occupation level" at MC-10 (Sinelli 2001:87). It also was dated to Cal AD 1160 with a two-sigma range of AD 1020 to 1240 (Sinelli 2001:Appendix C). This data indicates that all three sites were established about the same time, presumably as people

from Hispaniola sojourned to the Turks & Caicos to collect foodstuffs and manufacture beads for export.

The second date from Unit E, Level 5 is spatially close to that obtained from the provenience directly beneath it. As such, I expected the two dates to be temporally close as well. However, the second sample returned with a date with multiple intercepts (AD 1320, AD 1350, AD 1390) that cluster around AD 1355—a full two centuries later. This suggests that Spud was less intensively occupied than Middleton in the Meillacan phase, so that the cultural deposit accumulated more slowly over time. Alternatively, it could reflect patterns of site usage or waste disposal. As I have discussed, our test excavations provided only a general idea of how Spud was organized and there are many lingering questions as to how different areas of the site were used over time. In any case, the most intriguing aspect of this date is its association with unquestionably Meillacan ceramics. To my knowledge, the most recent date for Meillacan ceramics in the Turks & Caicos is AD 1280 at GT-2 on Grand Turk (Keegan 2000:150-151). Thus, identifying diagnostically decorated Meillacan ceramics from the middle of the 14<sup>th</sup> century at Spud pushes the local timeframe for these ceramics forward by decades. Additionally, the presence of a white-slipped Chican sherd located in the same provenience adds to the growing body of evidence that Meillacan ceramics did not “give way to Chican cultures about AD 1200” (Rouse 1992:97), but that the two styles continued to be manufactured—and actively used, apparently by the same people!—for at least another century and a half.

The final date from the bottom of Unit A, Level 4 was situated at bedrock, well below the Chican lug identified in Level 1. It produced a date of AD 1290, but a dual two-sigma range of AD 1260 to 1320 and AD 1350 to 1390. These results tell us two things. First, the Lucayan phase very likely postdates AD 1290. This argument is also supported by the AD 1320-1350-

1390 date obtained from Unit E, Level 5. This provenience included both Meillacan and Chican ceramics, and the Chican sherd from this provenience was the lowest, stratigraphically speaking, of any Chican pottery we recovered at the site. As such, it is presumably the oldest Chican sherd in my assemblage, and indicates that Chican ceramics were not widely used at Spud until the early to mid 14<sup>th</sup> century. Second, it shows that this part of the site was not heavily used when the site was first established. The presence of charcoal on bedrock at AD 1290 indicates that the Meillacan phase residents who founded the site around AD 1160 did not use the seaward area around Unit A, but instead discarded their material further to the southwest near Units B and C. This suggests that Spud was a small-scale, perhaps semi-permanent settlement early in the Meillacan phase. It was not until perhaps late in the Meillacan phase or early in the Lucayan phase that the site expanded to the east and northeast. At this time, the fill deposits were created and subsequently used by the Lucayan phase residents. I lack enough data to determine exactly why they did this, or how they used the area after they filled it in, but my hunch is that they expanded the site to accommodate a growing regional population. If so, then Spud was established as a larger-scale settlement sometime around AD 1290. I expand on this hypothesis and what it tells us about the relationship between Spud and Middleton in the next section.

### **Interpretation of Middleton and Spud**

To appreciate the significance of Middleton and Spud, it is necessary to discuss them in context with other contemporaneous sites in the area. Here I focus only on the Caicos Bank: I incorporate all of the Turks & Caicos sites into a broad regional overview in Chapter 7. Because the earliest dates from both sites occur at AD 1160, let us begin with the Meillacan phase in the middle of the 12<sup>th</sup> century. Thereafter I will discuss the Lucayan phase.

### **The Meillacan Phase: AD 1160 to Circa AD 1300.**

The data clearly indicate that Meillacan peoples from northern Hispaniola began to colonize the Caicos islands in the middle of the 12<sup>th</sup> century. There are five Meillacan sites in Caicos islands from this period described here and elsewhere in the literature. Middleton, Spud, and MC-8/MC-10 all produced a date of AD 1160. (Although I did not obtain a radiocarbon date from MC-8, it is directly adjacent to MC-10 and the ceramic assemblages are virtually identical. Thus I believe that the two sites are actually one large site and the deposits there reflect that Meillacan peoples used the same general area over a protracted period of time. As such it is best to view them as a single entity.) Site P-5 on Providenciales produced a date of AD 1170 (Keegan et al. 1994:31). Finally, the site on Horse Cay off the north coast of South Caicos has a Meillacan component, and is therefore likely to be related to this Meillacan colonization event. However we could not excavate that site, we did not obtain a radiocarbon date from it, and the deposits appear to have been largely destroyed by tidal surges. Although I can only discuss this site in general, speculative terms, it is worth factoring into the equation for reasons that will soon become apparent. Additionally, there are Meillacan sites in the Ambergris Cays (Brian Riggs, personal communication 2004). However these have not been examined and nothing is known about them beyond the fact that they exist.

It is remarkable that multiple settlements appear to have been simultaneously established in the Caicos by colonists from another land. Clearly, some particular set of circumstances in Hispaniola led Meillacan peoples to strike northward, and I argue that the impetus for the initial Meillacan colonization was economic. Evidence from the Haitian site Ile à Rat supports this hypothesis. This site is thought to have been a subsidiary of an inland Hispaniolan cacicazgo and was charged with procuring marine protein: “Given the absence of significant populations of

terrestrial fauna, specialized fishermen living on the coast would have been crucial to the survival of inland settlements on Hispaniola” (Keegan 2007:60). Very likely, the Meillacan colonization of the Caicos islands was undertaken to enhance the food security of these inland settlements.

The manner in which the Middleton and Spud were initially established is not readily apparent, but comparative data suggest that they began as temporary encampments. MC-8/MC-10 on Middle Caicos provides the best evidence for this. The ceramic assemblage is most instructive. Locally-produced Palmetto ware accounted for only 199 of the 10,585 grams (1.88%) of ceramics from the site (Sinelli 2001:84,89). Pots are necessary to subsistence, but they also have a limited life span. Because “Pottery is too fragile to rely upon foreign sources to meet daily requirements” (Keegan 2007:184), the fact that almost all of the pots were brought from Hispaniola strongly suggests that MC-8/MC-10 was occupied on a sporadic, temporary basis. If MC-8/MC-10 can be viewed as a proxy for Spud and Middleton—and given the identical radiocarbon dates, it can—then it follows that these sites were also temporary camps in their infancy.

In the beginning, it is not clear how many of the Meillacan sites were occupied at the same time. The identical AD 1160 radiocarbon dates from Middleton, Spud, and MC-8/MC-10 and the AD 1170 date from P-5 would seem to suggest that these sites were all inhabited simultaneously. However, radiocarbon dating is a blunt instrument, and the 2-sigma date ranges from these sites certainly raise the possibility that occupations could have occurred decades apart. As such, there are several possible scenarios, which admittedly, are little more than informed speculation. In the first, a large group of coastal Hispaniolans visited the Caicos Islands on a regular basis and fanned out across the islands. Some would settle at Middleton,

others at Spud, and so on. They would do their business, then depart for home when they had procured all they could transport. Perhaps they rendezvoused to form a convoy. There is safety in numbers, and making the return voyage en masse would provide a sort of insurance that the cargo was evenly distributed and “all the beads weren’t in one canoe.” Or perhaps, occupants of any particular island simply departed for home when their canoes could hold no more, leaving the rest to follow when they were ready. The second possibility is that a single small group voyaged to the Caicos Islands and made the rounds to various locales, extracting what they could in each area before departing for home. Finally, a small group could have visited a different site every time they came to the Caicos: Middleton on one voyage, MC-8/MC-10 on the next, and so forth. Of the three possibilities, I find the first scenario most plausible. If their entire purpose in the Caicos was to collect as much food as possible for the inland communities of Hispaniola, then a large-scale effort makes the most sense. Many fishermen in many canoes on a single trip provides an economy of scale that surpasses that of a small group making multiple voyages across hazardous waters. Moreover, distributing a large group across the Caicos Bank would expand their overall catchment area and not over-harvest any particular zone. Finally, it would reduce the amount of time men were absent from their duties at home, and ensure that jobs performed by men (e.g. clearing the fields) were fulfilled. In any case, it is not possible to determine which of these scenarios actually played out given the current data. These are merely hypotheses, and all that can be stated for certain is that 4 or 5 Meillacan sites were established about the same time in the Caicos Islands.

The first fishermen who voyaged from Hispaniola to Middleton, Spud, MC-8/MC-10, P-5, and perhaps Horse Cay did so to harvest foodstuffs for export to their homeland. Yet all the evidence indicates that beadmaking soon became an important part of the economy. As

discussed earlier in this chapter, beadmaking was ancillary to their primary mission. Yet all of these sites (save Horse Cay) have ample evidence of a dedicated beadmaking industry, including P-5, where “there were *Chama* and *Strombus* shell beads in various stages of manufacture [and] a large chert core...on the surface” (Keegan et al. 1994:17). This suggests that beadmaking was adopted almost immediately, as soon as the pioneers discovered the local deposits of “red gold”. The evidence for beadmaking in the very bottom of the Meillacan phase deposits of Middleton and Spud corroborate this assertion. Thereafter, it is clear that beadmaking remained an important part of the economic output of the region throughout prehistory.

It is difficult to know exactly when the Hispaniolans stopped visiting the Caicos Islands temporarily and set up permanent shop there. However, it is apparent that the region was becoming more intensively and permanently occupied in the latter half of the 13<sup>th</sup> century. Beginning around AD 1280, new sites began popping up around the islands in what Keegan et al. describe as “something of a population explosion” (1994:50). At this time, MC-32 (AD 1284) and MC-36 (AD 1280) appear on Middle Caicos, PC-1 (AD 1290) is established on Pine Cay, and P-1 (AD 1284) emerges on Providenciales (Keegan et al. 1994:31). This “explosion” was likely caused by a combination of migration from other islands and natural population growth that occurred as the Caicos Islands residents enjoyed the bounty of the environment that drew the early Meillacan colonists in the first place.

It is a challenge to state with certainty when Middleton became a permanent settlement. However, the regional “population explosion” coincides with the time in which Spud is physically expanded: recall the AD 1290 radiocarbon date obtained from charcoal atop the bedrock under the fill in the seaward portion of the site. This suggests that resources had come under pressure at Middleton, and that it was time to establish an alternate paired site to more

fully expand the catchment. If so, then it is possible that Middleton hosted a permanent population in the first half of the 13<sup>th</sup> century. This may also be when Horse Cay began to play an important role. Perhaps the Middleton-Spud-Horse Cay settlements formed a sort of settlement “triad,” with Middleton hosting the primary, permanent settlement and smaller subsets of society relocating to Spud and Horse Cay on a semi-permanent basis as conditions dictated. Indeed, perhaps that segment of the population alternated time between Spud and Horse Cay. Both sites are approximately the same size, and importantly, sit in different environments and resource zones. With its access to the channel and open water, Spud would have been attractive during the seasons when waters were calmer (winter and spring) and fishing and lobstering was easy and productive. During the summer and fall months when seas were higher and the threat of tropical cyclones ever-present, the population could relocate to Horse Cay where waters were always still and conch and bonefish ubiquitous. Both sites are sufficiently distant from Middleton to minimize catchment overlap. Also, both are located less than a kilometer from the large land mass of South Caicos, which would have offered wood for fires and structures, arable land for gardens, and probably a fresh water source. Unfortunately I cannot test this hypothesis given the lack of data from Horse Cay. However, it makes sense given the theoretical logic of population growth forcing settlement pairing, and the geographic, climatological, and biogeographic realities of this area of the Caicos Bank.

It is apparent that MC-08/MC-10 was not permanently occupied. Because more than 98% of the diagnostically decorated sherds are Meillacan (Sinelli 2001:96-100), the site was probably abandoned prior to the 14<sup>th</sup> century. Admittedly, this assertion is based upon the “conventional wisdom” challenged by the presence of Meillacan ceramics around AD 1355 at Spud. Still, the almost complete dearth of Chican ceramics at the site strongly suggests that it

was abandoned before this style became widely available, for which a date of AD 1300 remains appropriate. In any event, the question of “why” MC-8/MC-10 was abandoned is more intriguing than “when,” and exploring this question sheds light on the relationships between Caicos Island sites in the Meillacan phase. Recall site MC-12 on the north coast of Middle Caicos. Three radiocarbon dates from this site range from as early as AD 1040 to AD 1282 (Keegan et al. 1994:31, Carlson 1999:144). Thus, the Meillacan wave that settled the region beginning around AD 1170 was not the first colonization of the Caicos Islands—people had been living there for more than a century. Moreover, the Meillacan peoples who fanned out across the islands coexisted with the residents of MC-12 throughout the Meillacan phase. Indeed, MC-12 was occupied until the late 15<sup>th</sup> century, at the same time as nearby MC-32 as well as MC-6 on the southern coast of the island (Keegan 2007:162).

Although the sites are coeval, there are compelling differences between MC-8/MC-10 and MC-12. The first is in the ceramic assemblages. More than 98% of the ceramics at MC-8/MC-10 are Meillacan, with a handful of Palmetto ware. In contrast, MC-12 offers the earliest definite evidence for Palmetto ware in the Caicos islands, so “by AD 1000 one identifiable element of Lucayan culture had emerged” in the region (Keegan 2007:90). In fact, 95% of the assemblage at MC-12 is Palmetto ware, with the remaining 5% somewhat evenly split between Meillacan and Chican (Keegan 2007:139). This suggests that the initial residents of MC-12 hailed not from Hispaniola, but the central Bahamas to the north, where Palmetto ware was in use as early as AD 660 (Berman and Gnivecki 1991; Rouse 1992:100-101). Second, there is no mention of beadmaking activity at MC-12. A 10 x 10 meter unit was excavated at the site in 1982, so if such behavior were taking place, it is reasonable to assume it would have been detected. The lack of beadmaking at MC-12 reinforces the idea that these people were not from

Hispaniola, for all of the excavated Meillacan phase sites in the Caicos Islands show evidence for beadmaking. Between the ceramic assemblages and the disparity in beadmaking activity, it seems clear that the residents of MC-12 had a cultural identity distinct from that of the Meillacan colonists from Hispaniola. They probably traced their immediate roots to the central Bahamas, and from there to Cuba (Berman and Gnivecki 1995). If the Meillacan people and the residents of MC-12 were culturally distinct, then it appears that at least three discrete cultures were present in the Turks & Caicos Islands in the 12<sup>th</sup> century. Recall the Coralie site on Grand Turk. Its Ostionan ceramic assemblage is unique in the region, and suggests an affiliation with eastern Hispaniola. I find it fascinating to consider how these multiple cultures may have interacted to influence the development of the Lucayan culture that was so ubiquitous in the Turks & Caicos in the 14<sup>th</sup> and 15<sup>th</sup> centuries. That, however, is a topic for future research.

I believe that these ethnic differences played some role in the abandonment of MC-8/MC-10 and the rise of a permanent settlement at Middleton. This is plausible because there is no economic reason Meillacan- and Palmetto-producing peoples could not have both lived on Middle Caicos. Any settlement on the south side of Middle Caicos would not have imposed on the resource base exploited by MC-12 on the north coast. Recall from Chapter 2 that the people of MC-12 relied heavily on fish from the reefs and waters on the north coast of the island that lay within a 5 km radius of the site. In contrast, sites like MC-8/MC-10 and MC-6 on the south coast of the island exploited conch and other resources from the Caicos Bank. In short, there is no overlap among the catchments, so there should be no significant competition for resources. This point is bolstered by the fact that MC-12 and MC-6 coexisted in the 15<sup>th</sup> century. If the larger settlement at MC-6 did not encroach upon the food resources of MC-12, then there is no reason to believe that the much smaller, temporary camps at MC-8/MC-10 did either. Instead, I

believe that the people who had lived at MC-12 for generations by AD 1160 were not amenable to foreigners living on their island. Neither they nor the Meillacan phase people seemed to adopt much of the other's culture or technology, which suggests that relations were kept at arm's length. The lack of any shared culture or worldview with their neighbors could have resulted in tension that caused the less-established Meillacan peoples to leave Middle Caicos for other options in the region, specifically Middleton Cay.

The evidence from the Meillacan phase at Middleton and Spud shows that Meillacan peoples intended to maintain their unique cultural identity as they settled the region more permanently. Recall the limited evidence of contact between these people of Middleton and Spud and the residents of MC-12 discussed above. William Keegan (personal communication 2009) suggests that cultural differences in food preparation may have limited the utility of Palmetto pots to the Meillacan phase residents of Middleton and Spud. Palmetto pots, with their outward-flaring rims, were not as suitable to boiling food as the Meillacan vessels with constricted openings. As such, the Meillacan phase residents of Middleton relied primarily upon imports of appropriate vessels from Haiti. The limited amount of Palmetto ware that they did employ was perhaps used as a last resort, when imported pots were scarce prior to a new shipment, or perhaps only for preparing certain kinds of dishes. That the residents of Middleton went to the trouble to import their ceramics rather than adopt local technology is a clear indication that they intended to preserve and replicate their Hispaniolan lifeways as completely as possible in their new locale.

I anticipate that some will dispute this interpretation and argue that the preponderance of imported vessels indicates that Middleton was not permanently occupied at any point in the Meillacan phase. Yet I believe it was, for the following reasons. First is the size of the site. All

of the evidence, especially the fossil midden, indicates that Middleton harbored a substantial population in the Meillacan phase. Second, the plaza was built in the Meillacan phase. As I discussed above, plazas were associated with chiefs and elites and were designed to project power, among other things. This would have been important in the Meillacan phase, as the people of Middleton and its affiliates would have needed to legitimize themselves to the culturally distinct settlement at MC-12 as well as those from the other sites that were popping up during the “population explosion” of the late 13<sup>th</sup> century. A plaza would cement the status of the Middleton chief as a person of importance, and his people as a force to be reckoned with. There would be no need to project this image if Middleton were only sporadically occupied. Third, it seems that Spud was expanded around AD 1290 and that more people began living there around that time. This suggests that the population of Middleton had grown to the point where permanent settlement pairing became necessary. Again, if Middleton was a temporary camp, there would be no need to relocate any of its residents to nearby cays or expand the catchment zone. Finally, there is the nature of the relationship between Middleton and Hispaniola. The first Meillacan voyages to the Caicos were economically motivated. As time progressed it is reasonable to assume that the Hispaniolan demand for Caicos foodstuffs, and in short order, beads, would naturally grow. Growth in demand could only be met through additional supply. At some point it would not be possible to satisfy this demand by dispatching Hispaniolan fishermen to the Turks & Caicos. It would be far more productive to open an overseas “office” of sorts where a permanent “staff” harvested the resources and prepared them for export on a regular, recurring basis. This, of course, would require a manager—in this case, a chief—to oversee local aspects of the trade. It would also necessitate that a more demographically diverse population be located abroad to satisfy the social and practical needs of

the workforce. Now wives and children relocate. At this point, the Middleton “office” as it were became a permanent fixture. Ile à Rat is such a place—people under a local chief ran a dedicated fishing enterprise, and lived permanently on this 1 acre island for hundreds of years (Keegan 2007:59-60). In the Meillacan phase, Middleton probably operated in a similar fashion, with Spud serving as a periodic base camp for fishing the reefs, channel, and open water and making beads for export.

### **The Lucayan Phase: circa AD 1300 to circa AD 1520(?)**

Around AD 1300, the people at Middleton and Spud started to phase out Meillacan pots in favor of Palmetto ware and Chican vessels. Recall from above that this happened suddenly at Middleton. The portion of the Meillacan phase deposits that we excavated are distinct from those of the Lucayan phase. It seems as if the site was abandoned suddenly, then recolonized after the Meillacan/Chican transition had been fully effected in Hispaniola. While it is not possible to know exactly when the site was abandoned, it probably occurred no later than the early 14<sup>th</sup> century. Chican ceramics and Meillacan ceramics coexisted for a time during that period, and we see evidence that both were used at Spud around the middle of the 14<sup>th</sup> century. However we observed no such admixture of the subseries at Middleton, suggesting that the site was abandoned before Chican pots were widely available.

I discussed some scenarios of Middleton’s abandonment earlier in the chapter and will not repeat them here. Yet the additional context provided by the excavations at Spud raise another possibility that merits consideration. The excavations and radiocarbon evidence at Spud indicates that the site was physically leveled and expanded around AD 1290. This date is close to the presumed time frame for Middleton’s abandonment. Earlier in this section I discussed how Spud may have been built up around AD 1290 to accommodate population growth from

Middleton. Alternatively, Spud could have been built up to accommodate the population of Middleton. It is clear from the morphology of Middleton that the cay is vulnerable to tidal surges. Perhaps a large storm hit the region, decimated Middleton, and killed some number of the local population. The survivors could have relocated to Spud, which is several meters higher and far more resistant to flooding. Some years later Middleton would have been recolonized, but not until after the Meillacan/Chican transition had been effected. Still, this is just a scenario. The truth is, I do not have any concrete data that explain why the island was abandoned. All I know for certain is that the Meillacan people left suddenly and the island was later recolonized by Palmetto/Chican using peoples who were well established there by AD 1440.

Sometime prior to the middle of the 15<sup>th</sup> century, the plaza had been rehabilitated and Middleton was once again a bustling community. There is not a comparable radiocarbon date for Spud, but similarities between the material culture clearly indicate that it also was occupied at this time. Of the many Lucayan sites known from this period, MC-6 and its affiliates on Middle Caicos are the best understood archaeologically. Thus it is important to consider the relationship between these sites and Middleton and Spud. There are other contemporaneous sites on Providenciales, but comparatively little work has been done at these so I will not speculate.

I argue that Middleton and Spud were affiliates of MC-6. The combined populations produced a variety of items for trade with Hispaniola, including salt, fish, conch, beads, and tools. Production of this merchandise took place in the vicinity where the raw material for particular finished items naturally occurred. MC-6 focused on salt production, given its access to the natural pan at Armstrong Pond. Salt was exported as a final product to supplement the diets of inland settlements in Hispaniola. Salt was also used to cure fish, which was another central focus at this site. Some of this salt may have also been sent to other sites like MC-32 or Spud to

preserve a portion of their catch for export. Conch was the chief product of the Middleton/Spud settlements. Under the supervision of a secondary elite, Middleton was engaged in full-scale conch production. Spud was less involved in conch production, but played an important support role by providing additional marine protein for the combined population and export via its proximity to the reef and open water environments. Spud's secondary role also seems logical given the theoretical disposition of the settlement pairing process, in which one site with the higher status lineage or lineages dominates the pair. Middleton's prepared conch was sent to Hispaniola and likely to MC-6, Spud, and other local sites under the corporate umbrella. This may explain why there are no conch piles anywhere near MC-6, which one would expect given the nutritional needs of the population at a site of its size. Additional products were also prepared for export. Beads were manufactured, although it seems more heavily at Spud than elsewhere. This again is probably due to Spud's location nearer the ecologies where a diverse array of appropriate mollusks occurred. Middleton also apparently plied a trade in conch tools and perhaps wooden implements, and while these likely did not account for a considerable percentage of total exports, this craft production could have enhanced the economic situation of non-elite households.

If all of this produce was exported to Hispaniola, then what did the Caicos settlements receive in exchange? In general, there is not a great deal of "spectacular" exotic cultural material at MC-6 and MC-32, or at Middleton or Spud for that matter. Certainly there are imported Chican ceramics, although these did not represent a significant portion of any assemblage. There are also exotic implements, but excluding the stone cemi from Spud, these mostly consist of utilitarian items like celts and drill bits. Absent a great deal of exotic material wealth, it is reasonable to assume that these settlements reaped some social benefit from its exports that is not

immediately obvious in the archaeological record. This may have come in the form of elite claims to the right of succession in the Hispaniolan cacicazgos. Keegan (2007) presents a compelling argument that the paramount cacique Caonabo was born at MC-6 and spent his childhood there before returning to the village of his mother's brother in Hispaniola to await his ascendancy. If so, then MC-6 and its Caicos affiliates must have been viewed with tremendous respect among elite and commoner alike within Hispaniola. This respect was bought with a consistent record of delivering not only needed provisions and wares, but also socially-imbued items like beads which enabled and reinforced a chiefly aura upon those who possessed them.

If Middleton and Spud were subsidiaries of MC-6 in the Lucayan phase, then it is possible that it played some role in the Middleton's rehabilitation after its period of abandonment. Conversely, it is conceivable that Middleton and Spud played some role in the establishment of MC-6. Although the data do not provide a clear answer to this "chicken or the egg" scenario, word of Armstrong Pond undoubtedly reached Hispaniola through its regular pattern of exchange with the Turks & Caicos, in which Middleton was a major player. That said, I do not believe that anyone from Middleton established MC-6. Rather, I argue that they would have been in the best position to pass intelligence about the area to Hispaniola. When that intelligence was acted upon, and by whom, presently remains a mystery.

One nagging question remains. What really happened to the Caicos Islands' Meillacan phase people? My sense is that they gradually transitioned into what is now called "Lucayan" as new technologies, ceramic styles, and socio-political organization of the emerging Taino chiefdoms gained hegemony in Hispaniola in the 13<sup>th</sup> and 14<sup>th</sup> centuries. Because the indigenous peoples of the region maintained close ties to Hispaniola throughout prehistory, it is reasonable to assume that changes on that island would inevitably trickle down to the Caicos Bank

settlements. Thus the residents of Middleton and Spud would have undergone a gradual process of “Tainofication” that not have been entirely voluntary nor entirely complete. Very likely, they would have retained at least some aspects of their Meillacan-era heritage, which had itself morphed from the pure Hispaniolan version as the Caicos settlements gained more economic power and autonomy during the course of the Meillacan phase. One holdover from the Meillacan era could be the decision to settle on small cays. Middleton and Spud were initially part of that settlement strategy, and always remained the primary settlements in the South Caicos region even as other sites were popping up on the larger islands to the north. Add in the central Bahamian influence contributed by MC-12, and the Turks & Caicos becomes a true melting pot in which disparate cultures and world views create a unique ethnicity that is different from that of any of its antecedents. As such, it may not be entirely appropriate to call the later indigenous peoples of the Turks & Caicos “Lucayan” at all. To do so ignores the unique evolutionary trajectory of these people by lumping them in with other cultures of the central and northern Bahama archipelago that have an entirely different history. Rather, the later prehistoric settlements of the southeastern Bahamas should be viewed as a distinct cultural unit—neither fully Taino nor fully Lucayan—but a commingled product rooted in and influenced by centuries of migration and cultural exchange with widely different groups. This phenomenon has occurred countless times throughout human history. While there are too many examples to list, considering the differences between New Orleans and Brooklyn will give the reader an idea of what I mean. As to how this played out in the inimitable laboratory of the Turks & Caicos, I do not yet know. But I intend to make this topic a central research focus in the future.

In conclusion, Middleton and Spud are important sites that can tell us a great deal about not only the particulars, but also the general evolution of indigenous settlements of the Caicos

Islands. I have only scratched the surface with my limited work there, but I hope I have provided my colleagues some useful food for thought. On a larger scale, I will incorporate much of what I laid out in this chapter into the broad, regional discussion in Chapter 7.

Table 5-1. The Middleton Ceramic Assemblage

PLAIN SHERDS	Body Ct.	Weight	Rim Ct.	Weight	Total Ct.	Total Wt.
Small (<2cm)	108	171	3	9	111	180
Medium (2-4 cm)	63	316	4	16	67	332
Large (>4cm)	14	197	2	52	16	249
Palmetto Ware	76	341	9	60	85	405
<b>GRIDDLE</b>						
SHERDS	Body Ct.	Weight	Rim Ct.	Weight	Total Ct.	Total Wt.
Plain	2	31	0	0	2	31
Decorated	0	0	0	0	0	0
Palmetto Ware	0	0	0	0	0	0
<b>DECORATED</b>						
SHERDS	Body Ct.	Weight	Rim Ct.	Weight	Total Ct.	Total Wt.
Small (<2cm)	5	9	0	0	5	9
Medium (2-4 cm)	6	31	3	14	9	45
Large (>4cm)	3	67	2	39	5	106
Palmetto Ware	0	0	0	0	0	0
					300	1357

Table 5-2 Middleton Invertebrate Remains

Large Mollusks						MNI
	< 10 cm	10-20 cm	> 20 cm	UID	Pieces (l)	
<i>Strombus gigas</i>	8	33	32	20	54.0	93
<i>Strombus gigas</i> tools	Pick	Gouge	Adze	Scraper	Hammer	
Finished tools	102	0	2	0	0	104
Unfinished tools						14
Total <i>Strombus gigas</i>						211
<i>Cittarium pica</i>	< 4 cm	4-7 cm	> 7 cm	UID	Pieces (g)	
	0	0	0	12	213	13
<i>Charonia variegata</i>						2
Other Mollusks						Mass (g) MNI
<i>Codakia orbicularis</i>					39	10
<i>Codakia orbiculata</i>					1	1
<i>Tellina georgiana</i>					56	19
<i>Nerita</i> sp.					68	35
<i>Oliva</i> sp.						13
<i>Olivella</i> sp.						4
<i>Pinctada radiata</i>					3	2
Acmaeidae (limpets)					2	1
UID land snails					91	4
Chitons						Mass (g) MNI
<i>Acanthopleura granulata</i>					40	20
Corals						Tools Mass (g)
<i>Acropora cervicornis</i>					9	207
<i>Acropora palmatta</i>						76
<i>Solenastria</i> sp.						100
<i>Montastrea annularis</i>						39

Table 5-3. The Spud Ceramic Assemblage

PLAIN SHERDS	Body Ct.	Weight	Rim Ct.	Weight	Total Ct.	Total Wt.
Small (<2cm)	34	76	3	6	37	82
Medium (2-4 cm)	32	295	1	6	33	301
Large (>4cm)	11	210	4	47	15	257
Palmetto Ware	193	686	10	79	203	831
<b>GRIDDLE SHERDS</b>						
Plain	1	16	0	0	1	16
Decorated	0	0	0	0	0	0
Palmetto Ware	2	129	0	0	2	129
<b>DECORATED SHERDS</b>						
Body Ct.	Weight	Rim Ct.	Weight	Total Ct.	Total Wt.	
Small (<2cm)	2	3	0	0	2	3
Medium (2-4 cm)	0	0	1	4	1	4
Large (>4cm)	2	24	2	58	4	82
Palmetto Ware	2	12	0	0	2	12
				300		1717

Table 5-4 Spud Invertebrate Remains

Large Mollusks						MNI
	< 10 cm	10-20 cm	> 20 cm	UID	Pieces (l)	
<i>Strombus gigas</i>	22	34	6	14	111	76
<i>Strombus gigas</i> tools	Pick	Gouge	Adze	Hoe	Knipper	
Finished tools	21	0	3	1	5	30
Total <i>Strombus gigas</i>						106
<i>Cittarium pica</i>	< 4 cm	4-7 cm	> 7 cm	UID		
	6	17	5	20		51
Other Mollusks						Mass (g) MNI
<i>Oliva</i> sp.					19	4
<i>Olivella</i> sp.					3	7
<i>Chama sarda</i>					7	6
<i>Purpura patula</i>					6	1
<i>Bursa corrugata</i>					22	1
<i>Cypraea zebra</i>					17	2
<i>Astraea americana</i>					7	1
Chitons						Mass (g) MNI
<i>Acanthopleura granulata</i>					4	1
Corals						Tools Mass (g)
<i>Acropora cervicornus</i>					10	247
<i>Diploria</i> sp.						487
<i>Montastrea annularis</i>						214



Figure 5-1. Location of Middleton Cay, Spud, and Cockburn Town Harbour. Image created in Google Earth.



Figure 5-2. Middleton Cay with west oriented at the top of the frame and north to the right. The red line highlights the relic beach and demarcates the approximate western shore of the island in prehistory. The enormous conch piles are clearly evident, even from space. Image created in Google Earth.



Figure 5-3. Some of the monumental conch piles of Middleton Cay.



Figure 5-4. Conch piles in the shallows southwest of Middleton Cay.



Figure 5-5. Southeast-facing view of two historic period conch-burning fire pits. The limestone cliff at upper left is part of the ridge that forms the island's relic western shoreline.



Figure 5-6. Extent of the Middleton site. Image created in Google Earth.



Figure 5-7. West-facing view of the eastern half of the fossil midden at Middleton.



Figure 5-8. West-facing view of the western end of the fossil midden at Middleton.



Figure 5-9. Imported ceramic sherd embedded with burned limestone and broken conch.



Figure 5-10. Palmetto ware sherd embedded near the bottom of the fossil midden.



Figure 5-11. Imported griddle sherd and burned limestone.



Figure 5-12. Imported rim sherd (center, to the right of the live nerite) and burned limestone.



Figure 5-13. Palmetto ware rim sherd embedded next to the live chiton.

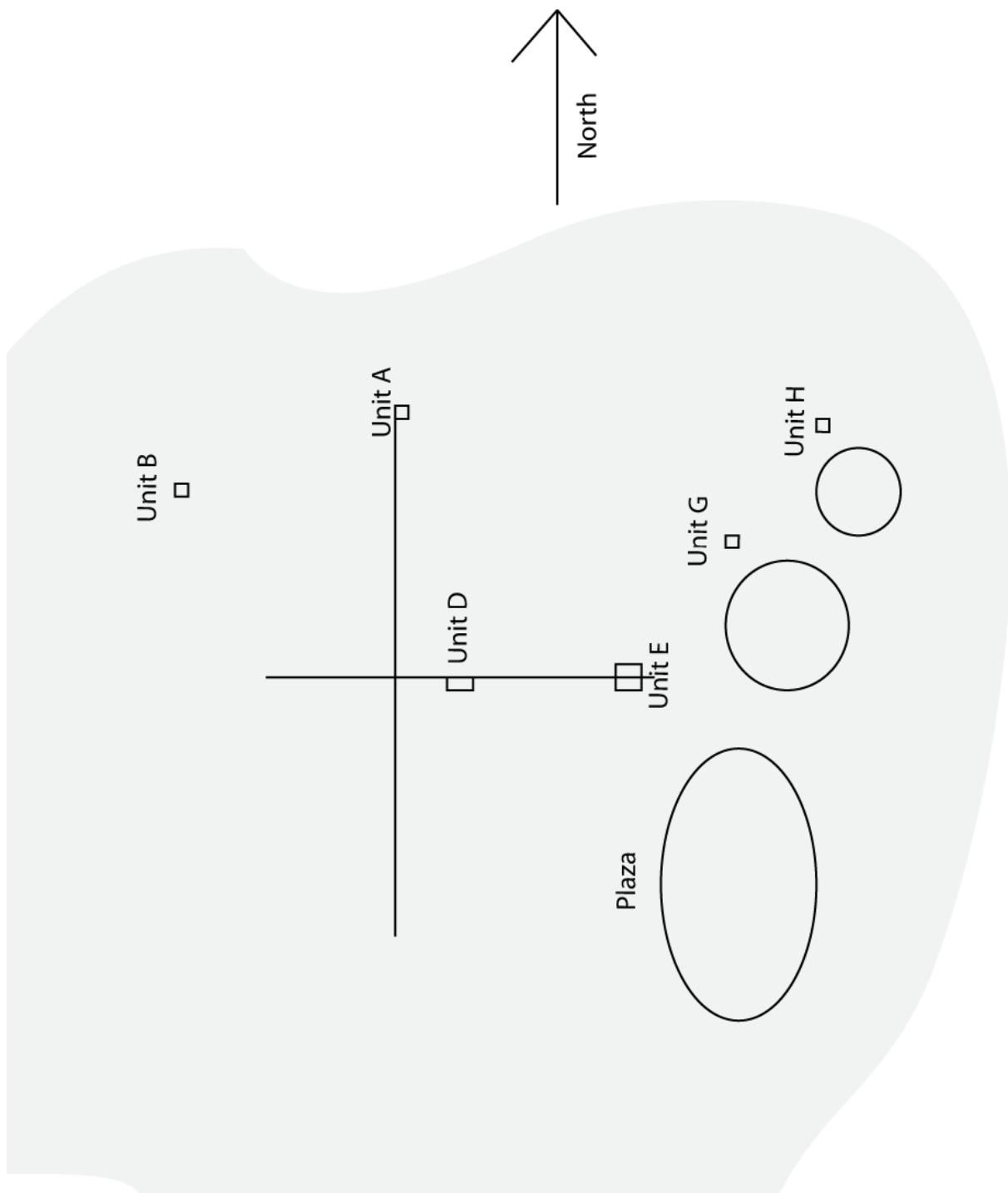


Figure 5-14. Map of the excavation units in Habitation 2 in Middleton.

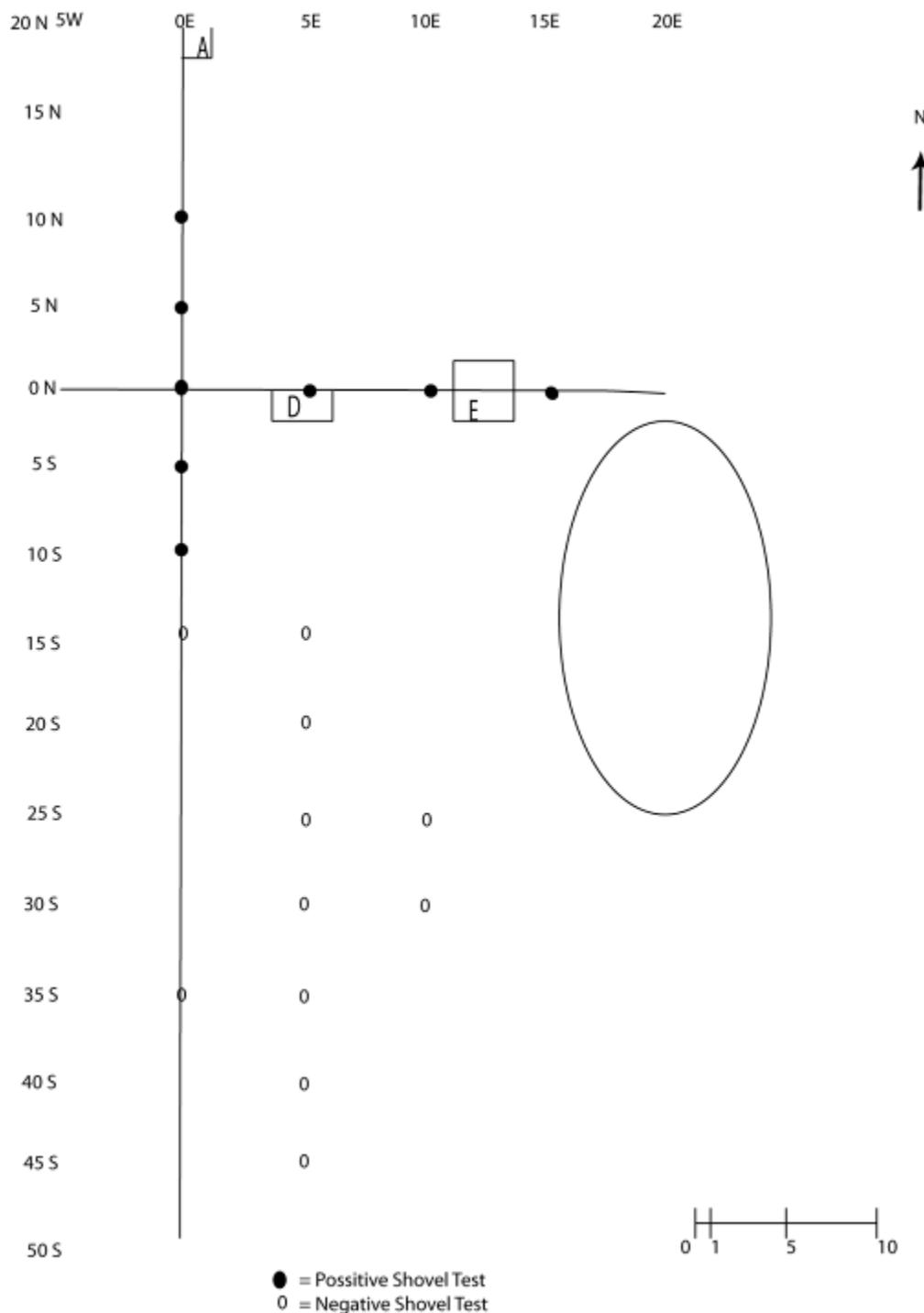




Figure 5-16. Location of the Middleton plaza in Habitation 2.

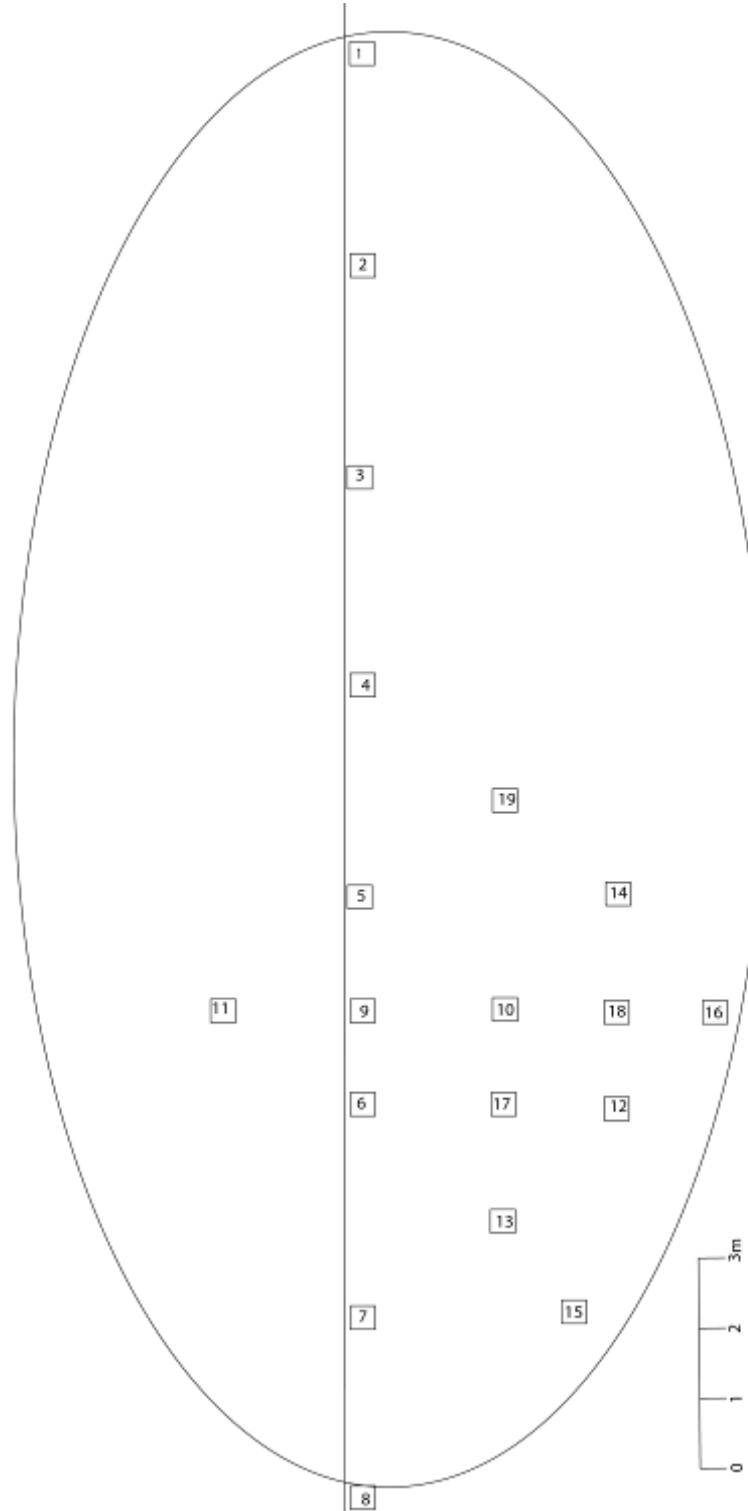


Figure 5-17. Map of the plaza test units at Middleton.



Figure 5-18. West-facing view of the Middleton plaza. Note the limestone boulders in the left foreground. The student in the upper-right background is standing near the G structure.



Figure 5-19. Winn Phillips (left) and Matt Kear in the center of the G structure house floor.



Figure 5-20. Matt Kear (left) and Winn Phillips in the center of the H structure house floor.



Figure 5-21. The rocks cleared from the Unit G house floor and piled directly nearby.

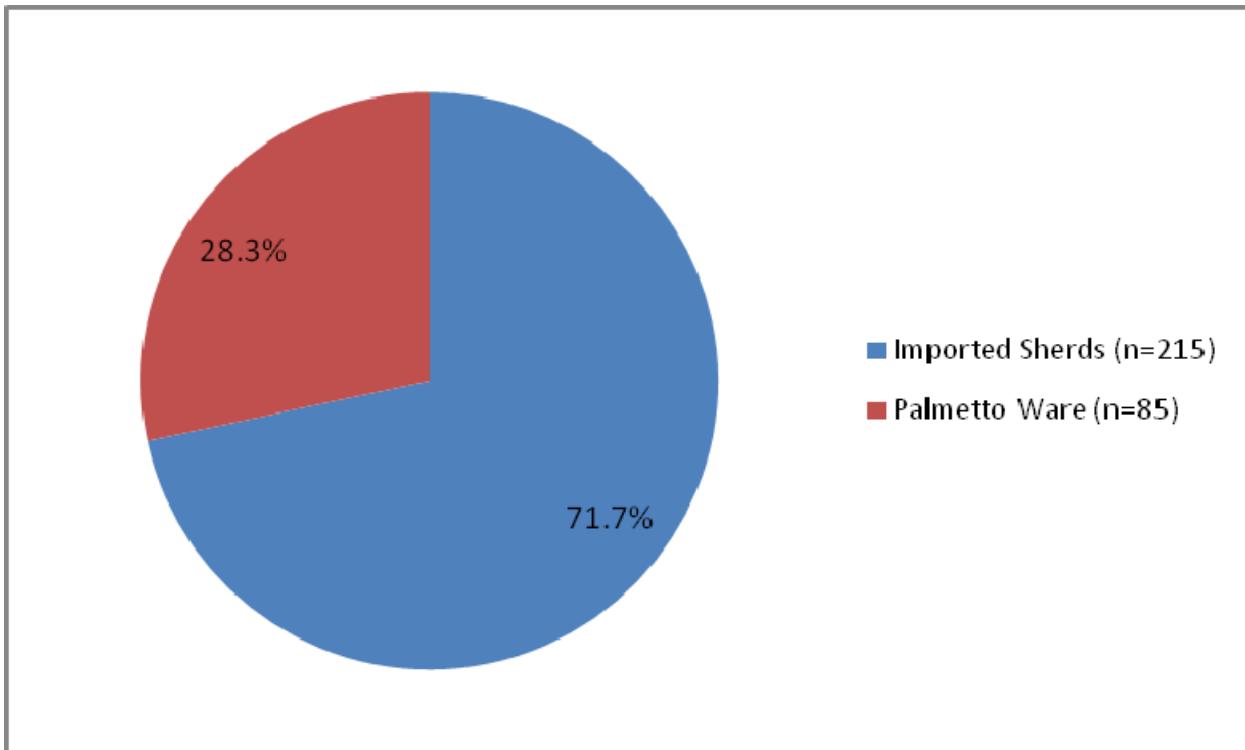


Figure 5-22. Frequency of imported and Palmetto ware ceramic sherds at Middleton.

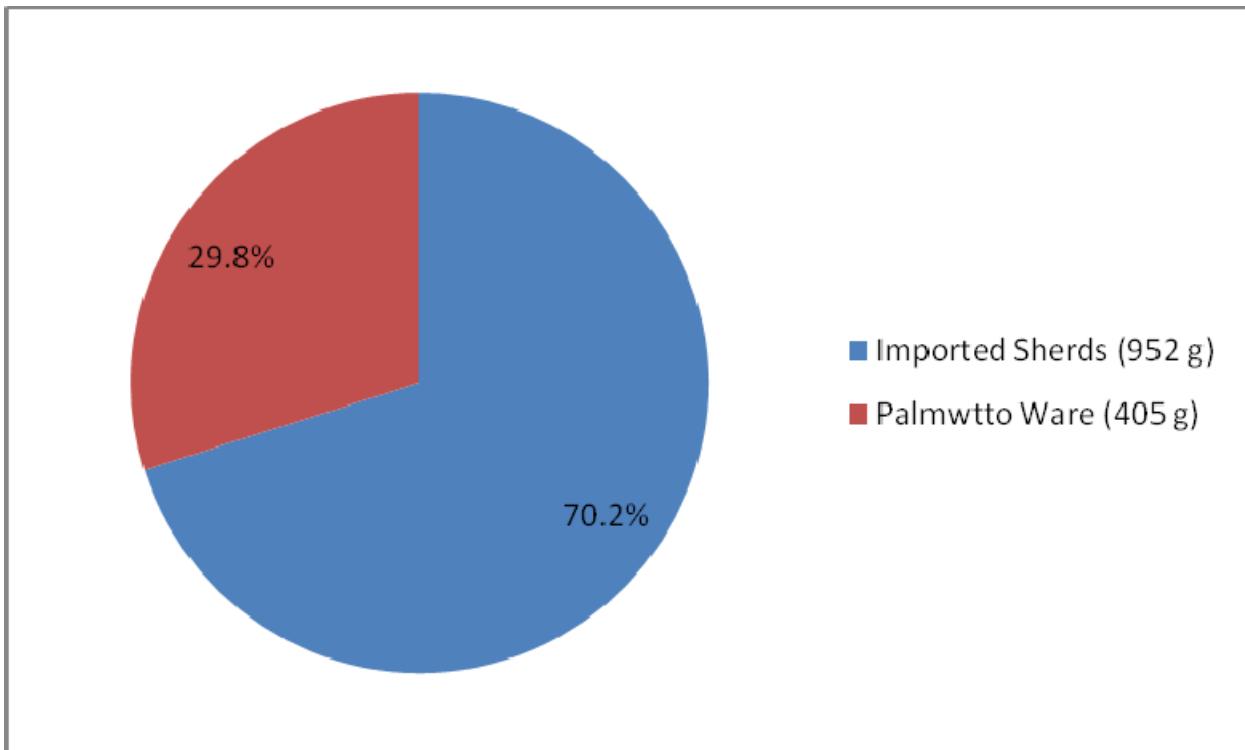


Figure 5-23. Relative weights of imported and Palmetto ware ceramics at Middleton.

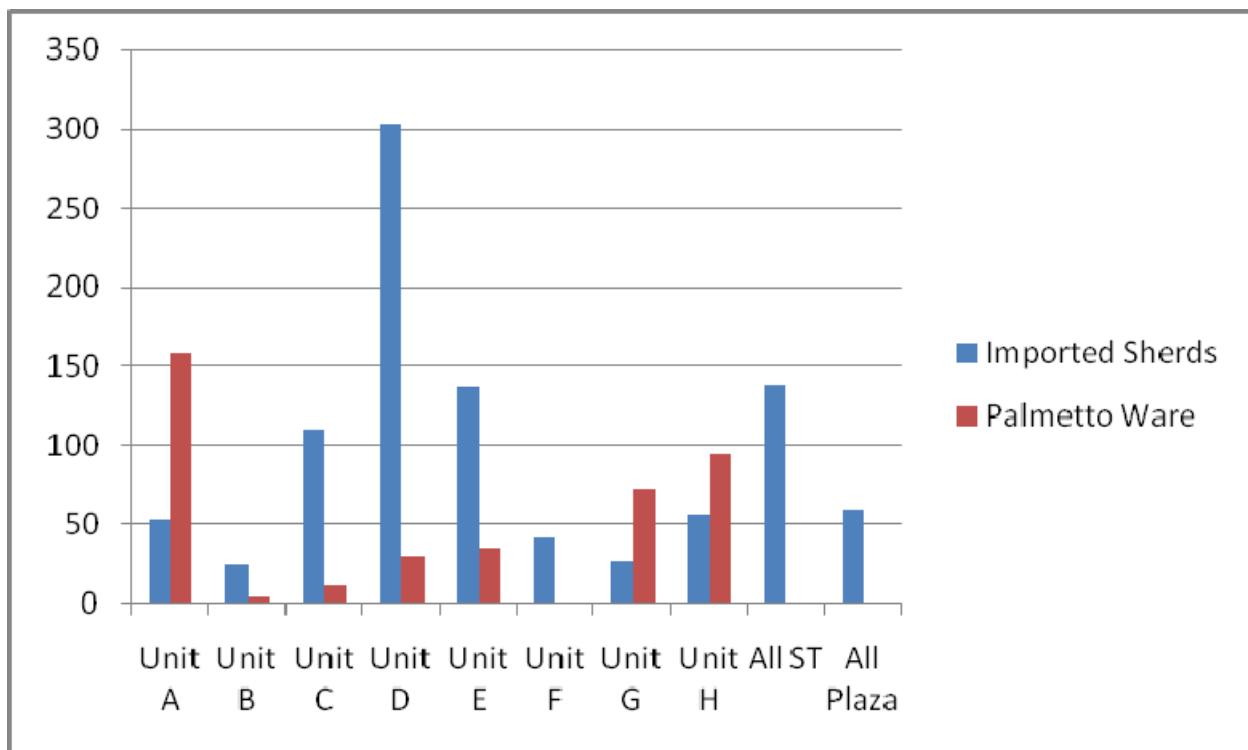


Figure 5-24. Vertical distribution of ceramic weight in grams by unit at Middleton.

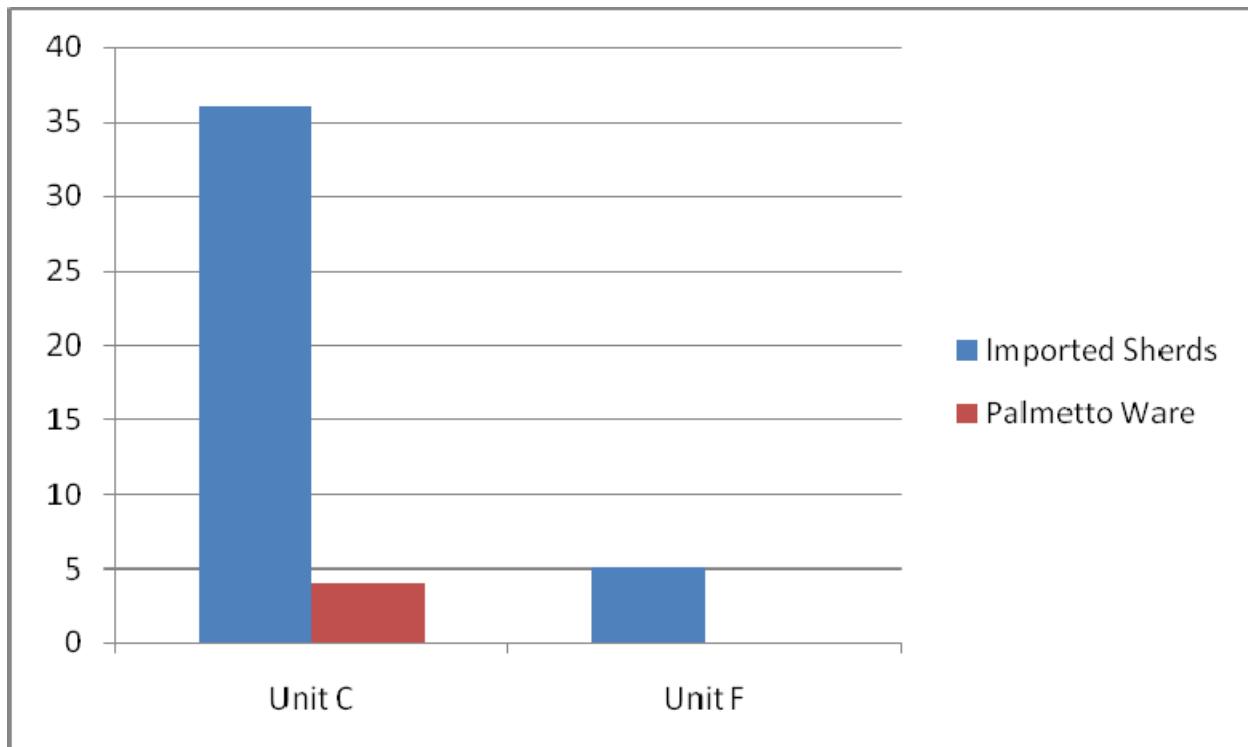


Figure 5-25. Vertical distribution of ceramics by sherd count in Habitation 1.

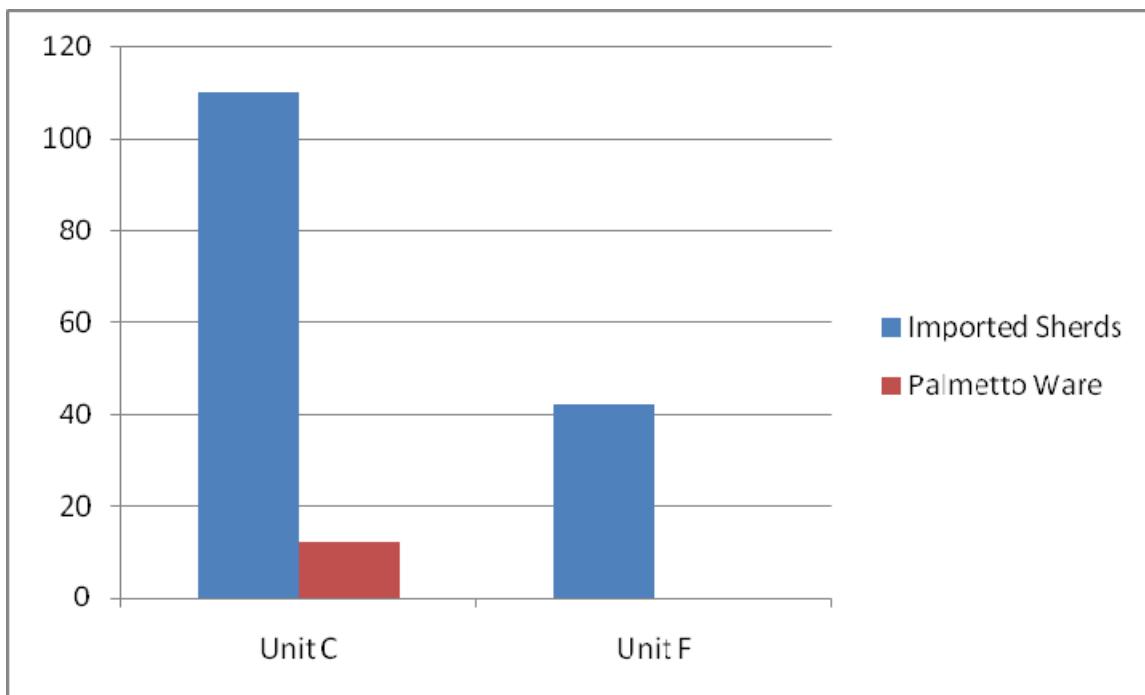


Figure 5-26. Vertical distribution of ceramics by weight in grams in Habitation 1.

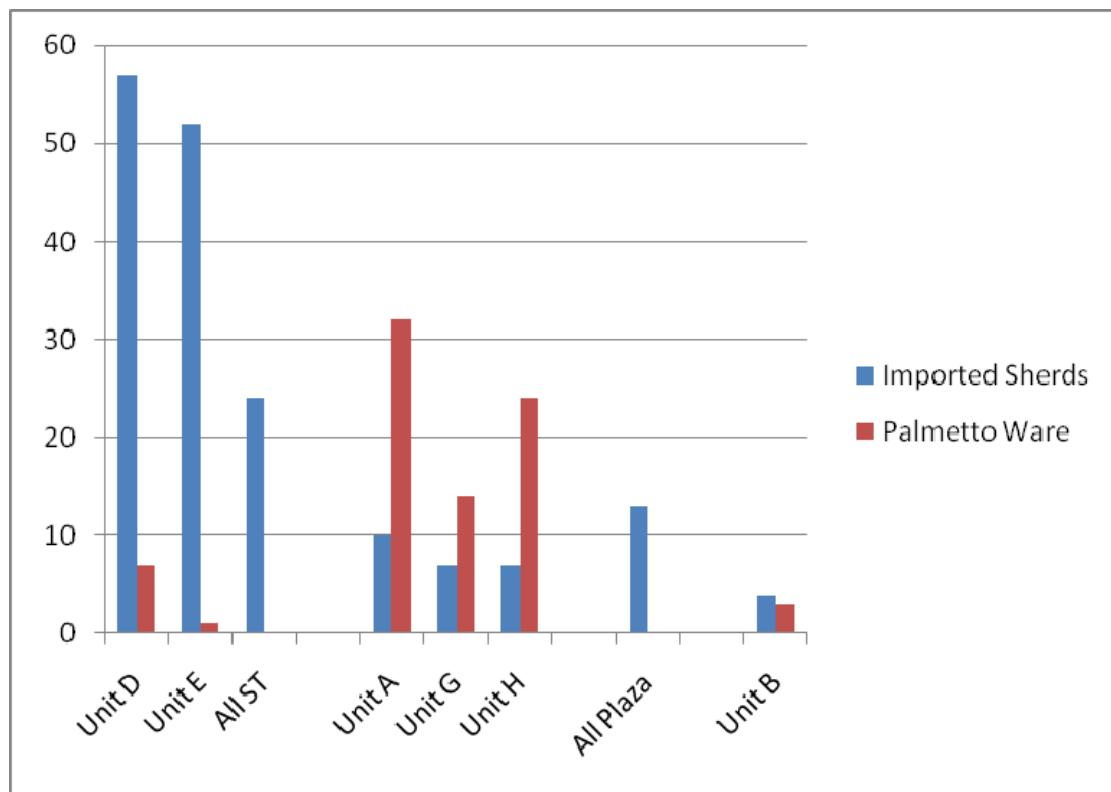


Figure 5-27. Vertical distribution of ceramics by sherd count in Habitation 2.

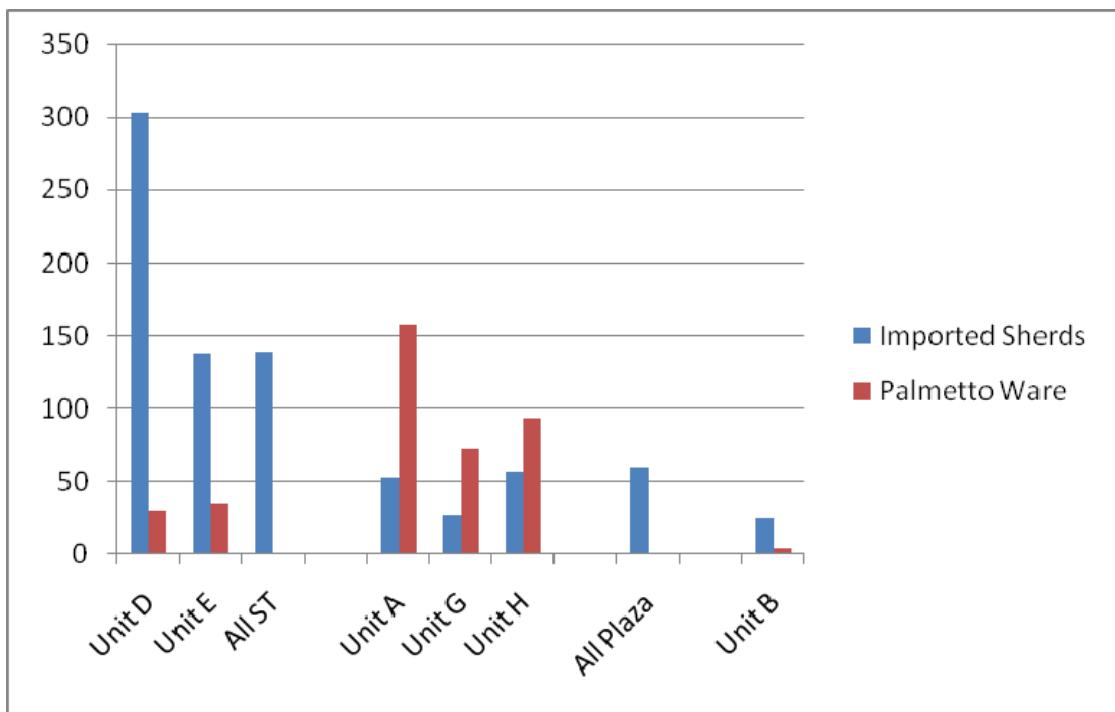


Figure 5-28. Vertical distribution of ceramics by weight in grams in Habitation 2.



Figure 5-29. Navicular bowl rim sherd with classic Meillacan designs and sherds with unusual white paste from shovel test 5S/0E.



Figure 5-30. Meillacan rim sherd from shovel test ON/15E.



Figure 5-31. Applique Chican lug and curvilinear-incised Chican sherd from Unit H.



Figure 5-32. Decorated sherds from Test Unit 14.

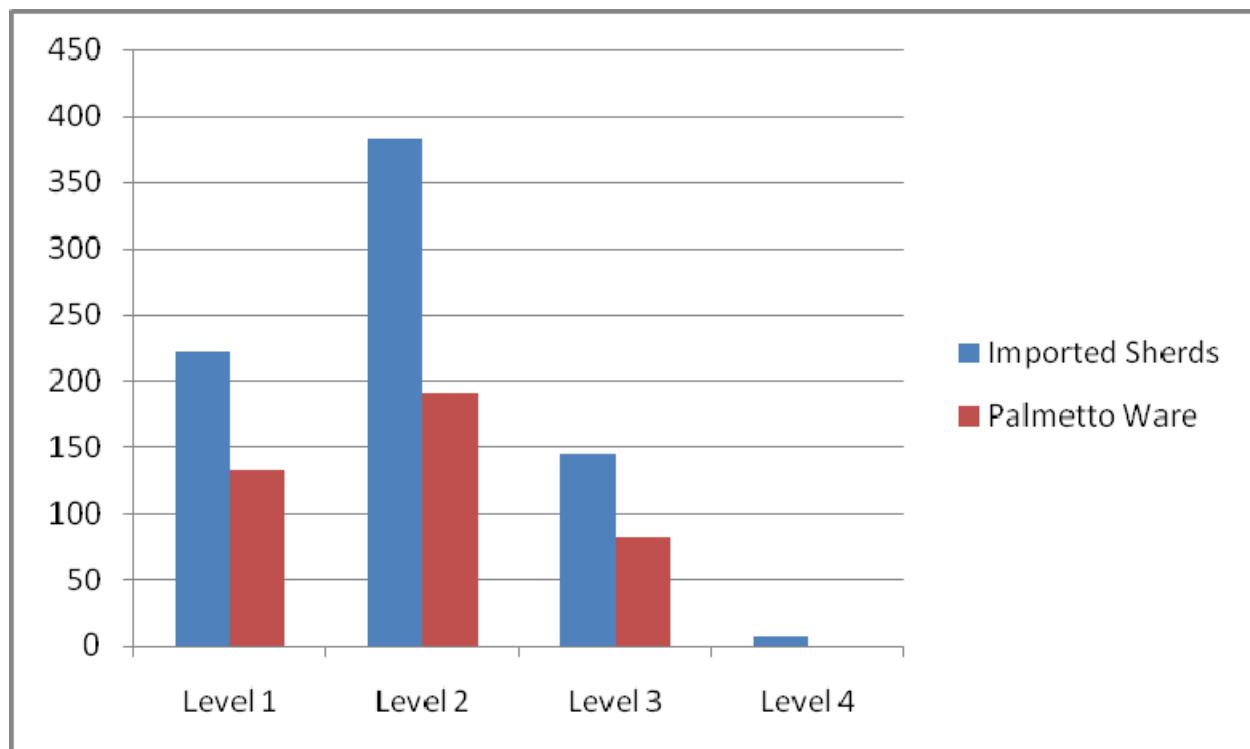


Figure 5-33. Horizontal distribution of ceramics, by weight in grams, at the Middleton site.

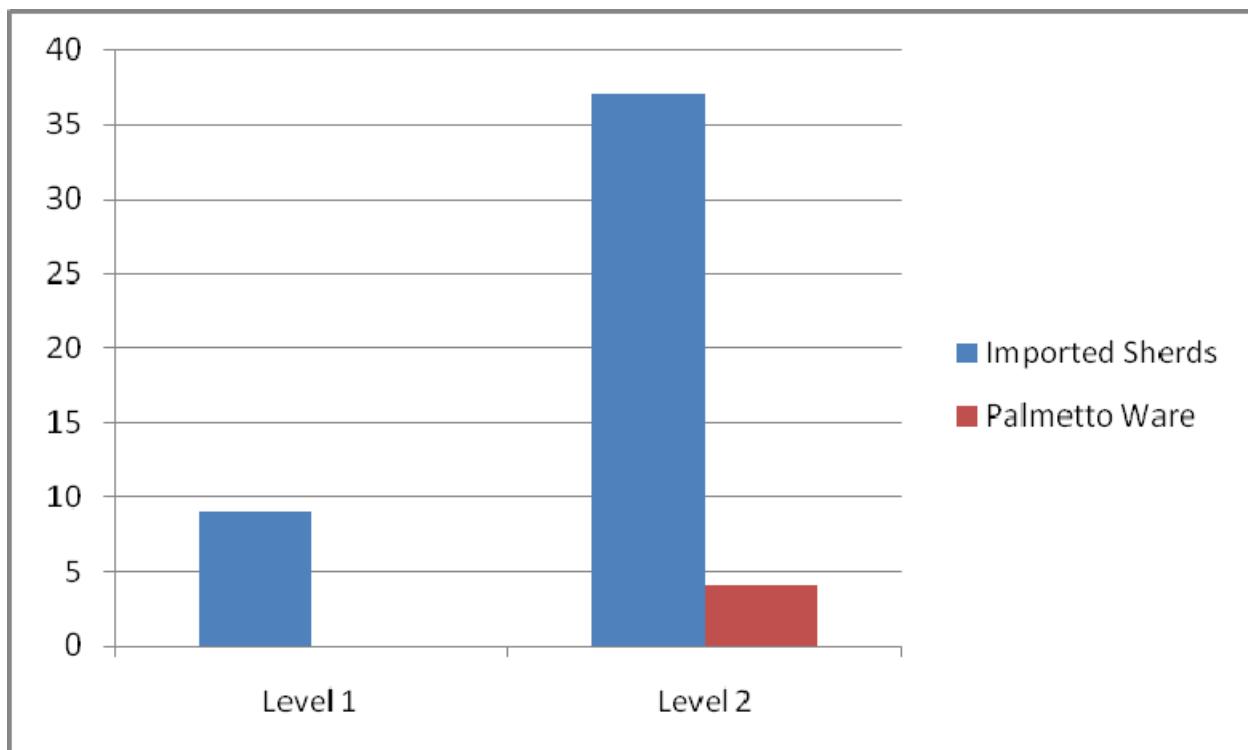


Figure 5-34. Horizontal distribution of ceramics by sherd count in Habitation 1.

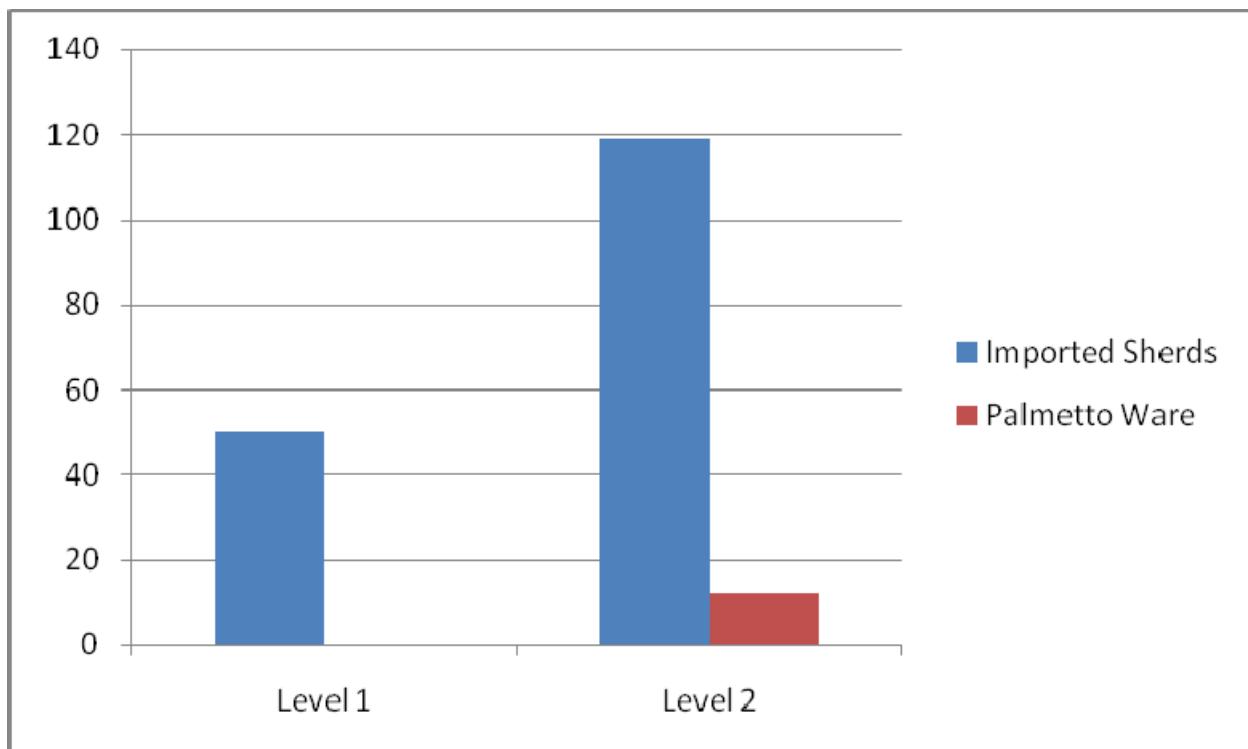


Figure 5-35. Horizontal distribution of sherds by weight in grams in Habitation 1.

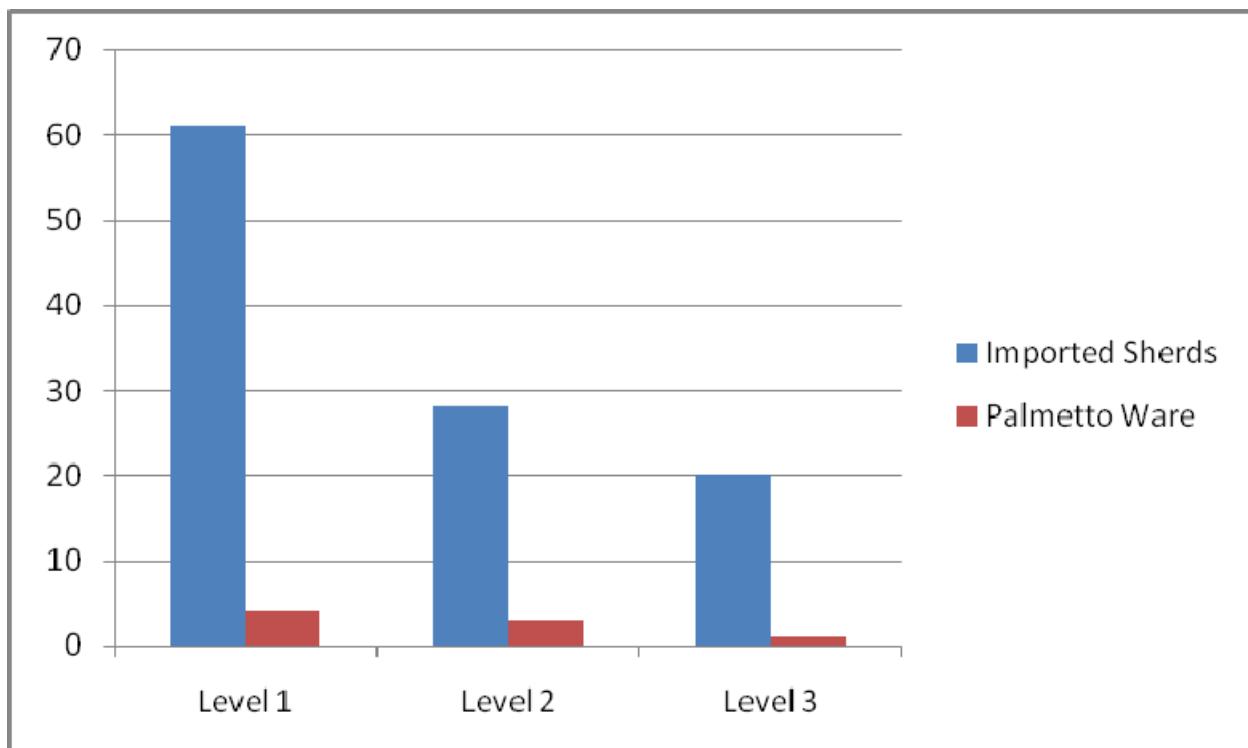


Figure 5-36. Horizontal distribution of ceramics by sherd count in E strucutre area.

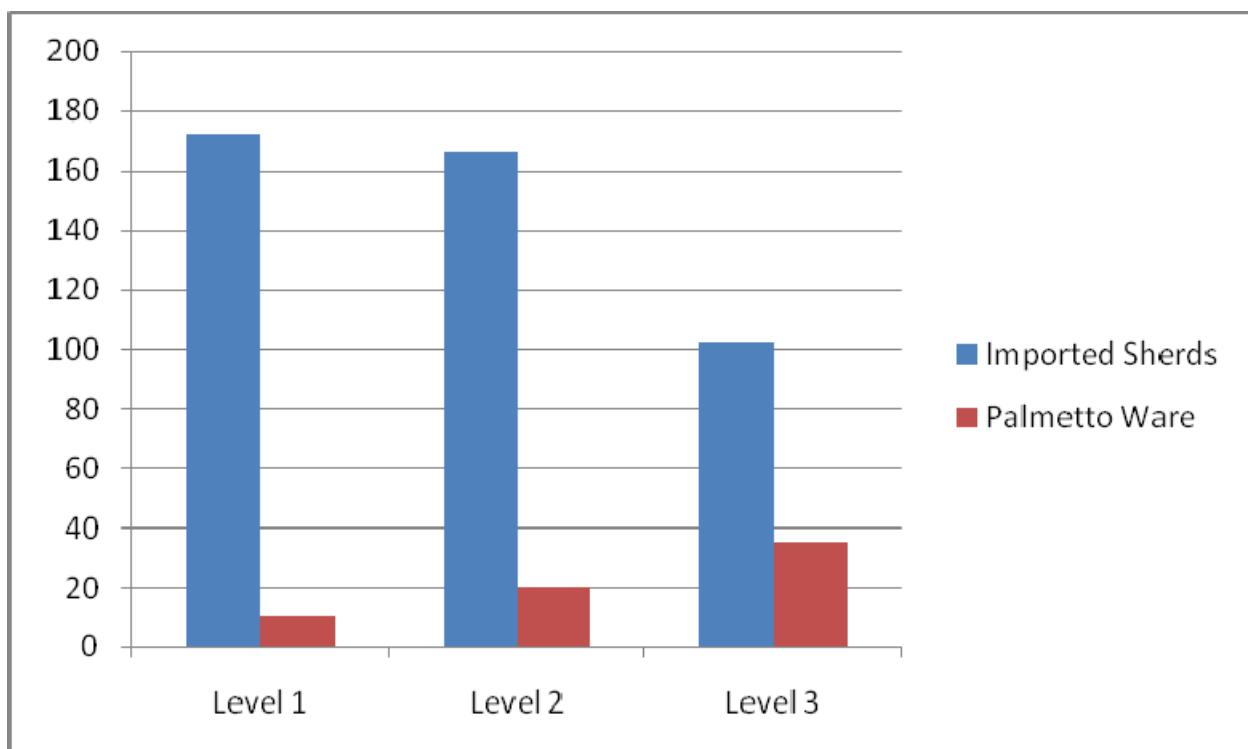


Figure 5-37. Horizontal distribution of sherds by weight in grams in the E structure area.

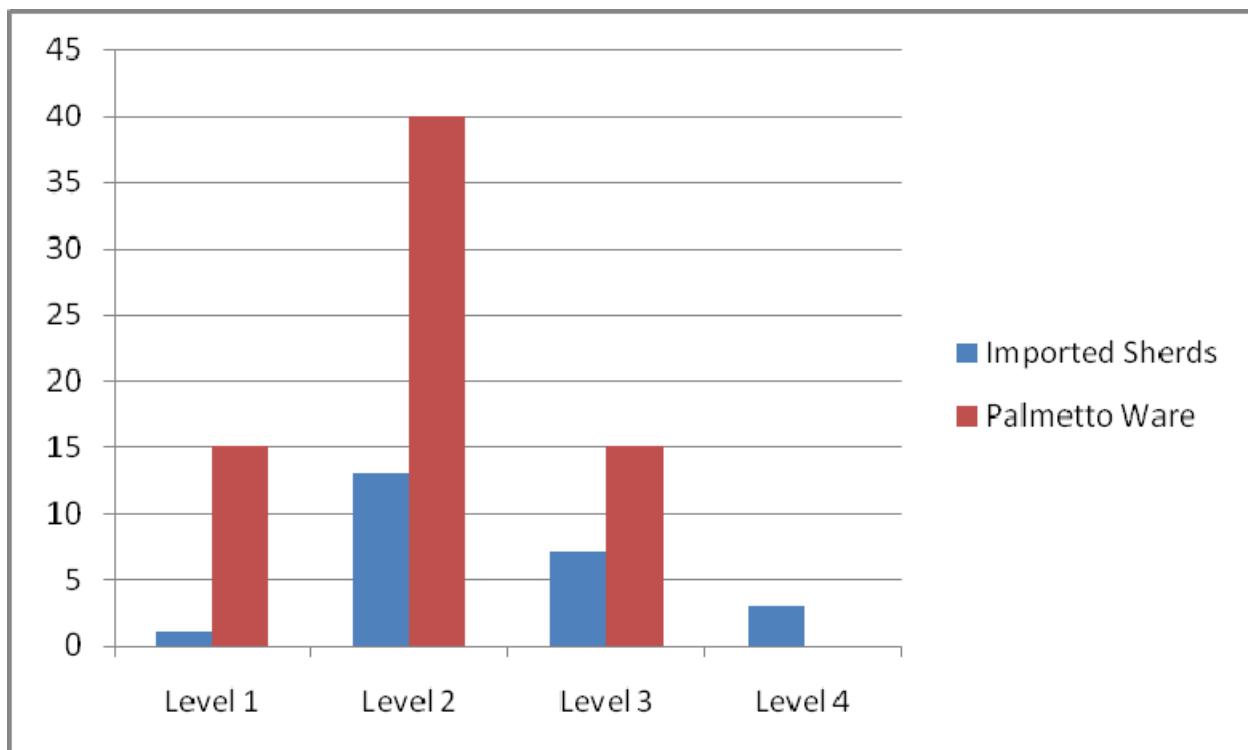


Figure 5-38. Horizontal distribution of ceramics by sherd count in G and H structure area.

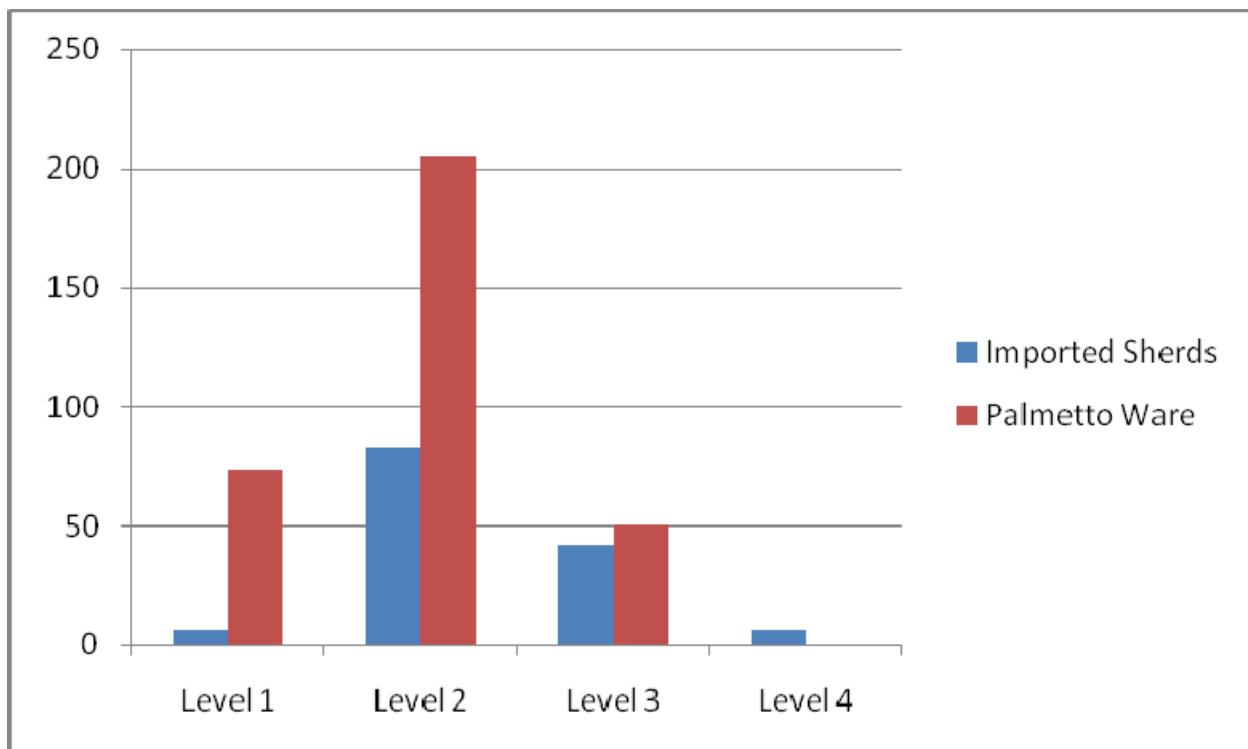


Figure 5-39. Horizontal distribution of sherds by weight in grams in the G and H structure area.



Figure 5-40. Several conch shells in various stages of tool manufacture.



Figure 5-41. Conch shells left behind after the central worhl had been removed.



Figure 5-42. Recreating the pick extraction method observed at Middleton Cay.



Figure 5-43. The beadmaking remains of Middleton.



Figure 5-44. Greenstone flakes from Unit H. Note the rounded surfaces of some flakes.



Figure 5-45. Shaped greenstone item of undetermined purpose.



Figure 5-46. Northwest-facing view of the stone “compass”. The slab in the lower left appears to have fallen forward, while the others remain upright.



Figure 5-47. Precise west-facing view of the stone “compass”.



Figure 5-48. Satellite image of Spud. Image created in Google Earth.



Figure 5-49. View of Spud from the southwestern beach, with Meghan Beverung in the frame for scale. Note the limestone ledge at left. Unit B was situated just to the right of that ledge.

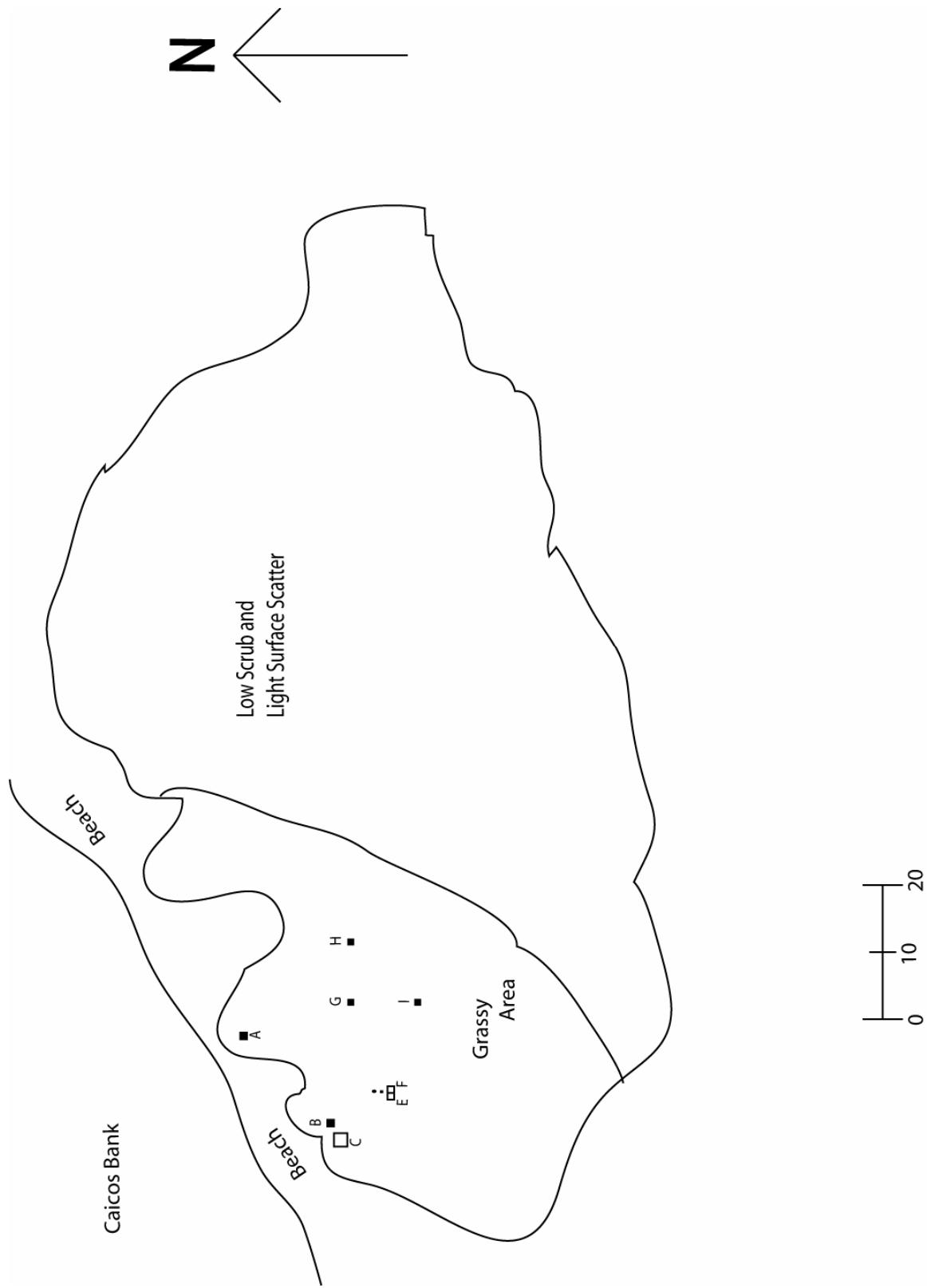


Figure 5-50. Site plan of Spud with excavation units.

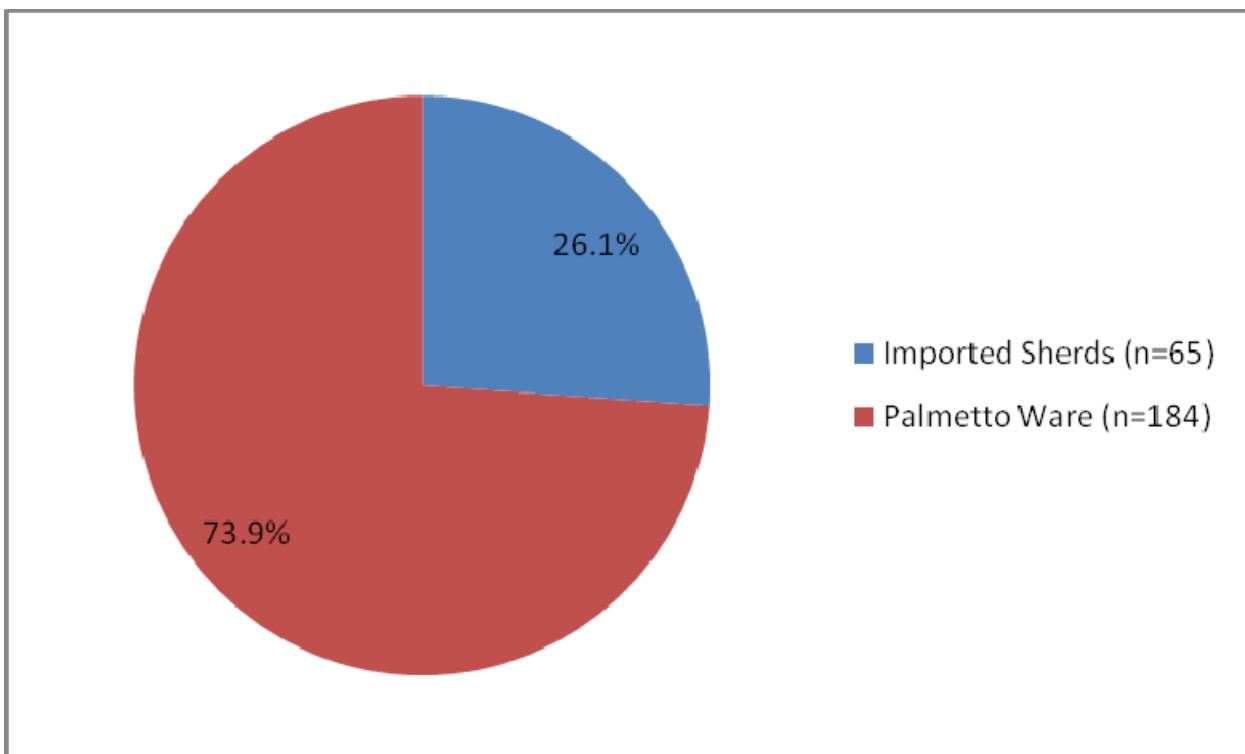


Figure 5-51. Frequency of imported and Palmetto ware ceramic sherds at Spud.

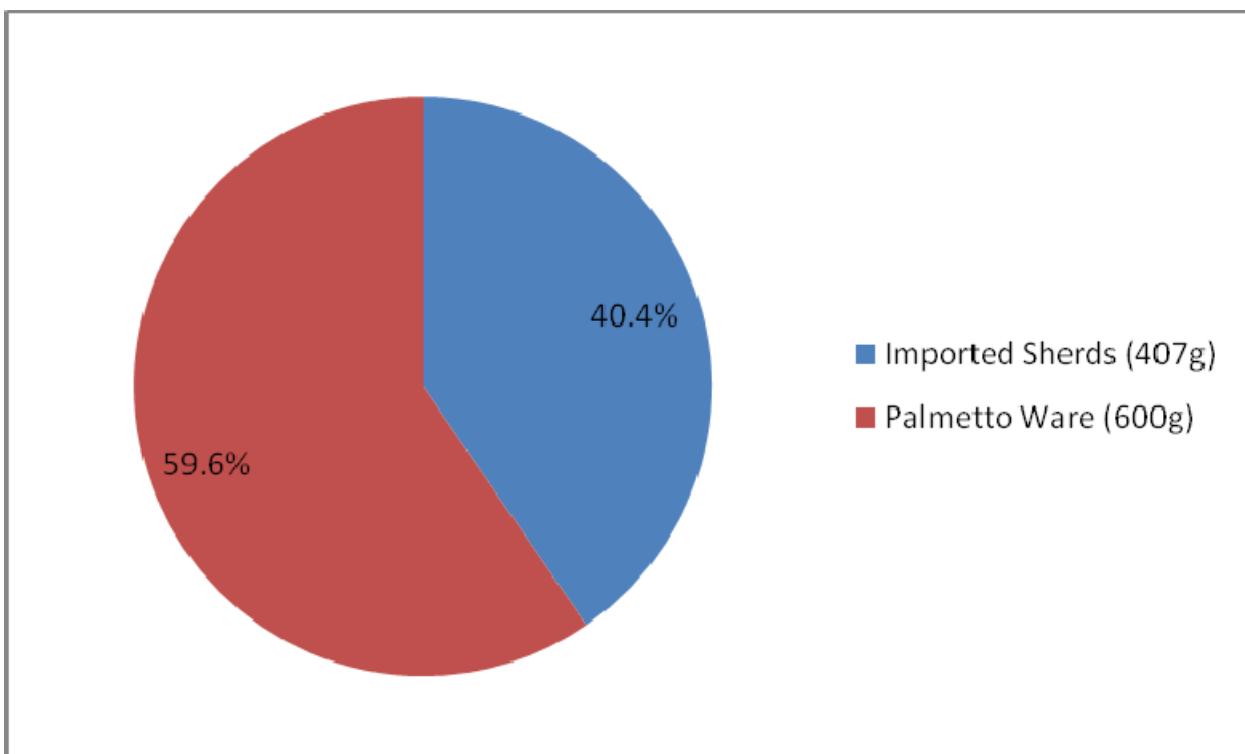


Figure 5-52. Relative weights of imported and Palmetto ware ceramics at Spud.

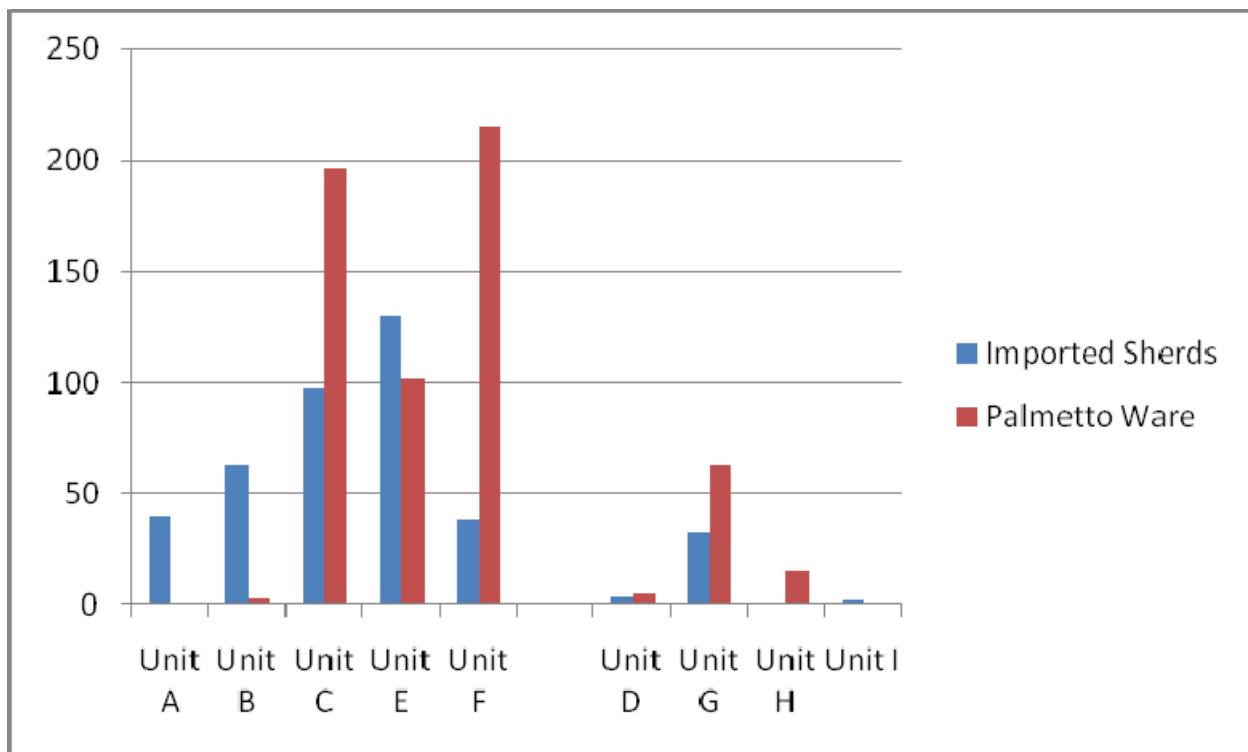


Figure 5-53. Vertical distribution of ceramic weight in grams by unit at Spud.



Figure 5-54. Meillacan sherd (left) and enigmatic “eye” lug (right) from Spud, Unit B.

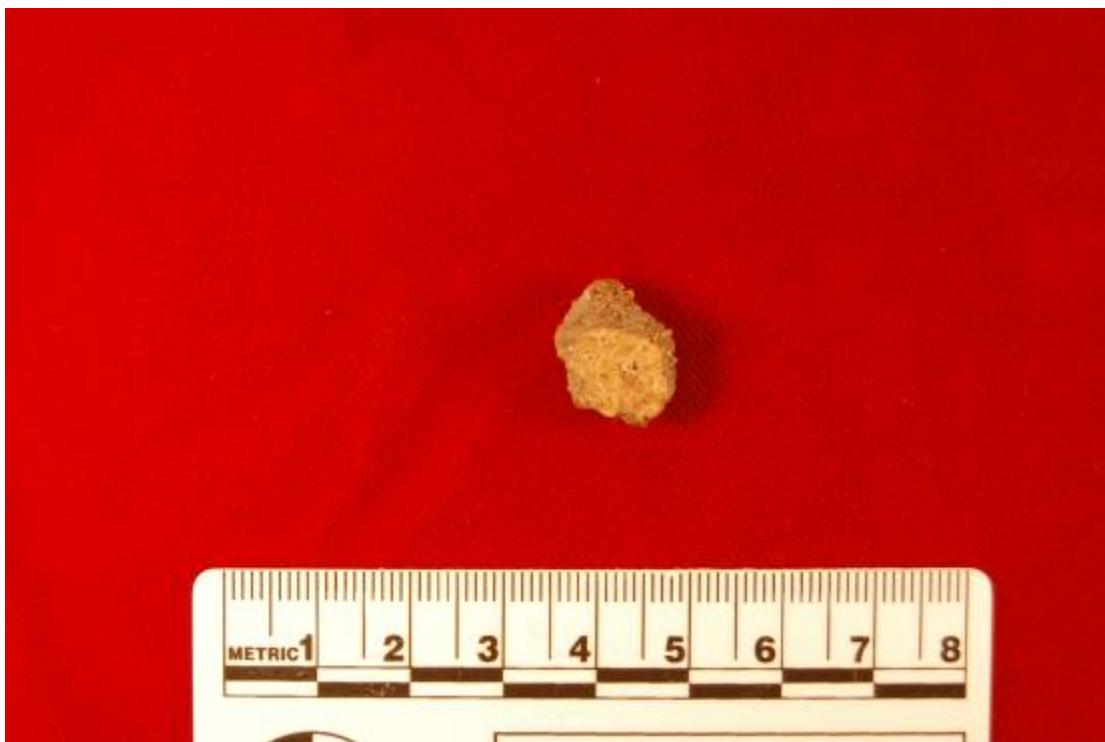


Figure 5-55. White-sipped Chican body fragment from Unit F, Level 5.



Figure 5-56. Meillacan rim sherd from Unit E, Level 5.

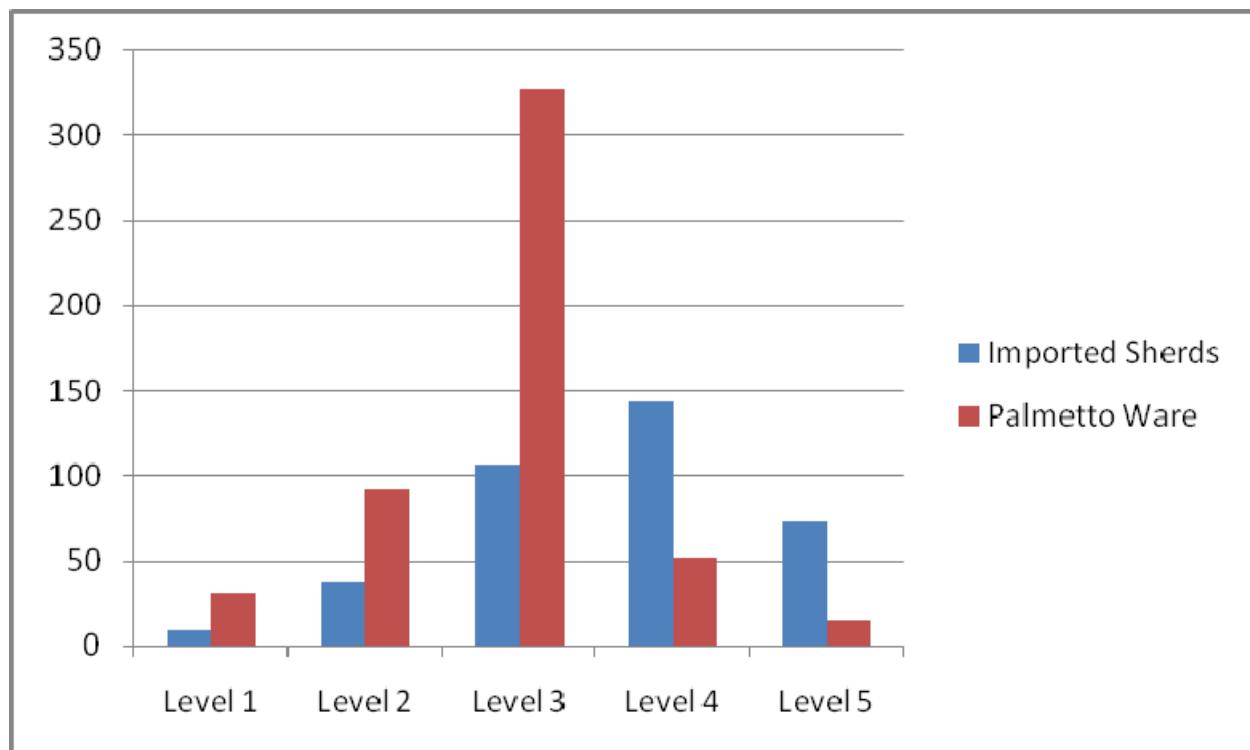


Figure 5-57. Horizontal distribution of ceramics, by weight in grams, at Spud.



Figure 5-58. The entire bead assemblage obtained from Spud.



Figure 5-59. Imported chert drill bit (left) and core (right) from Spud.



Figure 5-60. Exotic greenstone cemi from Spud.

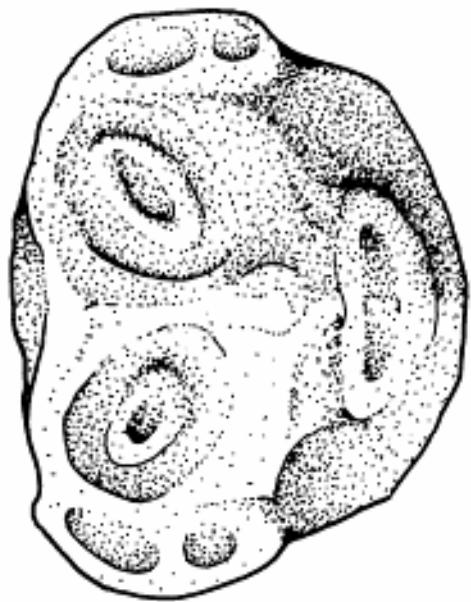
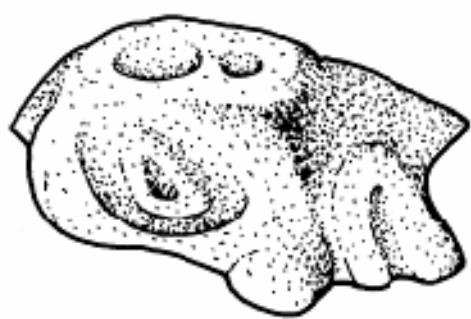


Figure 5-61. Detail drawing of the cemi. Art by Lucas H. Martindale Johnson.

## CHAPTER 6

### RITUAL CENTERS: THE PELICAN CAY AND DOVE CAY EXCAVATIONS

This chapter describes the excavations of the Pelican Cay and Dove Cay sites on the Caicos Bank. I begin this chapter with an overview of these sites and how they fit into the regional settlement pattern. As before, this is to provide the reader with some context in which to understand the sites. Next I discuss in detail our work at each site. For both sites, there is a “Data” and “Results” section. The data section includes a physical description of the cay and the site. This includes the basic details of the excavation: when it was conducted, how many units were excavated, how the site is laid out, and so forth. The results section begins with a full accounting of each site’s material assemblage and concludes with specific interpretations based on my analysis of the excavated materials and the local context in which they were recovered. I conclude the chapter by discussing how the sites integrate into the overall archaeology of the Caicos Islands. These interpretations are amalgamated into a broader discussion of indigenous activity in the Turks & Caicos Islands in Chapter 7.

#### **Pelican Cay**

##### **Data**

###### **Physical description of Pelican Cay**

Pelican Cay is situated on the northern extremity of the Caicos Bank off the northern coast of Middle Caicos. It lies in shallow water 650 meters north of Bambarra Landing, which is the name of the beach that local fishermen use to land their catch and park their skiffs. From Pelican Cay, it is a further 1100 meters to the fringing reef that marks the northern limit of the Caicos Bank. Here the water immediately plunges from tens of meters in depth to thousands. Large swells from the open North Atlantic plow into the reef, creating a constant, undulating roar and a line of white that stretches from one side of the horizon to the other. Because the reef

absorbs the ocean's fury, the interior waters are usually quite calm. It takes a robust squall to create more than a few whitecaps on this sheltered and peaceful part of the Caicos Bank.

Although the island lay 2/3 of a kilometer from the beach, it is possible to walk to Pelican Cay. It is attached to Middle Caicos by a tombola—a submerged sand bar—so that the water is between ankle and waist deep, even at high tide. As such, Pelican Cay is accessible to the current residents of Middle Caicos, and they take advantage of it. During our excavations, a father and his young daughter were sailing a model sailboat on the tombola. (Model sailboats enjoy a deep history on Middle Caicos, and the tombola's calm, shallow waters remain the primary venue. The Middle Caicos Sailing Association meets monthly at Bambarra Landing, and the Valentine's Day Cup regatta for captains aged 4-12 grows bigger each year (Middle Caicos Sailing Association 2009)). As they followed her boat, they eventually waded over to the island and asked what we were up to. I gave them a brief tour and learned that the man had been visiting the island since he was a boy. He and his friends used the island for fishing, fun, and overnight campouts. It was also a preferred place to hide from their parents after getting into trouble at school! Historic remains we excavated from the site corroborate his story, and suggest that Pelican Cay has remained a popular day trip destination since the Plantation era. We identified a clay pipe stem from the 18<sup>th</sup> century, and observed Coke cans, plastic forks, and other modern picnic trash. All of this material indicates that Pelican Cay has long been viewed as a place for recreation and repose. It is a gorgeous setting in which one can enjoy a cool dip, a fresh breeze, a delicious snack, or a quiet afternoon with friends and family. It sits like an accessible gem on the azure waters, and almost lures one to it from the beach (Figure 6-1). I apologize if I seem overly poetic in my description, but I love this little island. Pelican Cay is one of my favorite places in the Turks & Caicos.

Pelican Cay is rectangular in shape. It measures 95 meters by 45 meters, for a total area of only 0.39 hectares. Its long axis is oriented along an east/west bearing, so that its maximum profile faces the beach at Bambara Landing. The cay is limestone, and fossilized coral heads and mollusk shells within the stone indicate that it is the exposed remains of an ancient coral reef. Pelican Cay is highest on its northern side, which sits 4 to 5 meters above the high water line. The northern shore of the island is sheer, jagged rock that has a certain beauty, but looks fierce enough to mangle anyone unfortunate enough to slip and fall down it (Figure 6-2). The northern ¾ of the island consists of a flatish plateau of sorts that slopes gently as one moves south. The southern edge of the plateau drops off abruptly to an area of exposed limestone and rocks, so that the southernmost 8 to 12 meters of the island are essentially a featureless ironstone “beach.” This ironstone sits about a meter above the sea at high tide and terminates abruptly at the water, so that one must hop up a meter of sheer rock to access the island from the tombola. A small, triangular-shaped sand beach abuts the center portion of the southern shore. It is mostly submerged at high tide, but expands to the size of a couple of tennis courts when the water is out.

Pelican Cay has very shallow soils intermittently distributed amongst many limestone boulders and exposed bedrock. All of the soils are confined to the plateau on the northern ¾ of the island. The vegetation of the island is dominated by sea grape and a thigh-high scratchy plant that was somewhat of a nuisance, especially on the western third of the island (Figure 6-3). Elsewhere, some salt-resistant succulents and various other kinds of stunted vegetation survive in the more exposed areas. There is little terrestrial fauna on the island, but we did observe a surprising abundance of small lizards (*Anolis* sp.). These were particularly numerous among the sea grape at the western end of Pelican Cay, which must afford them cover from predatory birds. We also identified a defunct bird nest lodged in a thicket of sea grape. It was quite large,

perhaps 75 cm in diameter. Of course, sea birds frequent the cay to roost and feed on their catch. We noticed a number of fish carcasses that had been pecked clean of flesh. Fortunately we did not encounter any of the nesting avifauna that assaulted us elsewhere in the Turks & Caicos. Perhaps they find all of the human activity around the island disagreeable.

### **Description of the Pelican Cay site**

I discovered the Pelican Cay site in February 1999. I was in my first full semester of graduate school and my advisor, William Keegan, had brought me to Middle Caicos to assist with an Earthwatch program. After completing a day's work at MC-32, we were walking along the beach and back to Bambarra when I asked Bill if anyone had ever looked for a site on that little island offshore. He said something like "No, go ahead and check it out", so I, the wide-eyed businessman-turned-archaeologist, plunged onto the tombola and into the rising tide. Ironically, I missed the main part of the deposit during my visit, but nevertheless returned to Bambarra with a handful of small imported potsherds. The next afternoon Bill and I returned to Pelican Cay with Betsy Carlson and several Earthwatch volunteers. We pored over the cay and discovered the main deposit. Later that week, I returned again with two Earthwatch volunteers to execute a 1x1 meter test Unit. We recovered a wealth of Palmetto and imported ceramics, several beads, and an engraved conch-shell tooth inlay that would have been affixed to a wooden statue or cemi. It was a seminal moment in my career, and launched me on a trajectory to understand why small cays were important to indigenous peoples of the islands. Unequivocally, that experience is why I undertook this dissertation.

The Pelican Cay site is located on the southern half of the plateau near the middle of the island, directly adjacent to the ironstone that rims the southern shoreline. Based on our observations and measurements, it is 40 meters long by 15 meters wide. The cultural deposit is

densest in the center of the site. To the east of center, there is a robust surface scatter that gradually diminishes until the surface becomes sterile about 15 meters from the eastern end of the island. To the west of center, there is a sparser surface scatter that terminates at a dense stand of sea grape about 30 meters from the western end of the island. At the time, I wondered if the site might continue into the sea grape stand, so I hacked my way in and poked around best I could. I did not detect any cultural material on the surface, but it could be obscured by accumulated humus and leaf litter. In any case, I decided to focus our limited time on the rich deposits in more accessible areas of the site that promised to be more productive and less labor intensive to investigate.

The Pelican Cay site is notable for the amount of material present on or near the surface. This is undoubtedly due to the extremely shallow soils of the cay. None of our subsurface units was more than 29 cm deep in any place, and the average depth of deposit for all units was only 15.54 cm. Given the physical nature of the cay, it is unlikely that it ever had much soil to begin with. Moreover, the soils that did accumulate through the gradual decay of plant matter must be highly susceptible to erosion. These facts lead me to a hypothesis about why the cultural deposit is so concentrated. Recall that the island slopes gradually southward. Because the cay's surface lies at an angle directed toward the sea, the intense tropical downpours that soak the region during the wet season could have gradually washed away the finer soil granules not anchored by plant roots. However, this action would not be sufficient to carry away larger, heavier inclusions like rocks, mollusk shells, ceramic sherds, and other durable aspects of material culture. As such, the deposit would have slowly become concentrated into a single, dense layer on the bedrock, as centuries of rainwater acted as a sort of natural sieve.

The island and the site must also be vulnerable to cyclonic action. Sullivan appreciated this, and opined that “This cay is completely inundated during hurricanes, so it is doubtful that artifacts would remain even if it had been a prehistoric activity area” (1981:311). Yet he was only partially correct. I agree that some of the site has been destroyed, but as the reader will learn in the coming pages, much of the deposit remains. I believe that Middle Caicos’ fringing reef, combined with the cay’s elevation and orientation with its apex facing north toward the ocean, provides Pelican Cay with a degree of protection from storm activity. Several personal observations support this hypothesis. First, the waters around Pelican Cay remain quite calm even when large swells are abundant outside the reef. During a visit to Middle Caicos in March 2001, a frontal boundary passed and produced gale-force winds from the north. At the time, I was staying at the Blue Horizon near Conch Bar on the west end of Middle Caicos. Here, there is no fringing reef to protect this part of the coastline. I watched in awe as 20-30 foot swells right off the North Atlantic pounded explosively into Dragon Cay just offshore. This abuse has rendered Dragon Cay a barren, scoured rock, even though it is many meters higher than Pelican Cay. From this experience I surmised that the reef must provide a great deal of protection to the waters within its lee, which includes those around Pelican Cay. Moreover, the force of waves that do penetrate the reef’s protective curtain would be somewhat diminished by Pelican cay’s elevated, northern shore. This must be why Pelican Cay has retained soil and vegetation, while Dragon Cay has not. The second point concerns the effects of hurricanes on Middle Caicos. When I lived in Bambarra in 2000 while conducting Master’s Thesis research, I learned of a storm in the 1970s that drove a surge more than a kilometer inland, up to the cemetery at the base of the high ridge upon which the town is located. Although I never measured the change in elevation from the cemetery to the water line at the beach, my impression is that the cemetery

cannot lie more than 2 meters above mean sea level. Interestingly, the plateau upon which the Pelican Cay site sits today seems somewhat higher than that. There is an abrupt 1 to 1.3 meter drop from the plateau and the site to the ironstone “beach” that comprises the southernmost 8-12 meters of the island. This ironstone sits about 1 additional meter above the high tide line. Thus, the plateau must be at least 2 meters above the high water mark. Therefore, I believe that the southern terminus of the plateau—where it drops to meet the ironstone—represents the extent to which storm surges have advanced on the island. Whatever deposits were present below this point have indeed been scoured away, leaving only the exposed rock. Yet the deposits that were higher up the island were protected from this action, and have (obviously) survived to this day. If I am correct then the Pelican Cay site was probably wider than it appears today, perhaps by as much as 8 to 12 meters.

It seems that the collusion of several factors permitted much of the deposit at Pelican Cay to survive the elements. Still, I believe that inferring much from the provenience of the surviving material culture is problematic. First, the effects of post-depositional erosion are evident. I am not certain that the current location of material corresponds to where it was left by indigenous peoples and was not washed around by wave or rain action. Moreover, there are other taphonomical factors to consider. Chief among these is the island’s role as a local hangout since the 1780s. At a minimum, the surface scatter of material culture been subjected to centuries of pedestrian traffic, and it must have been disturbed by this activity. Curio collecting is also highly probable. A pretty adorno or finished bead might be pocketed by an intrigued grown-up. Moreover, as anyone with children knows, little ones tend to pick up anything (rocks, leaves, sticks, shells, etc.) that they find interesting, unusual, or can incorporate into some impromptu

game. In sum, I am less confident that the items we recovered accurately reflect their prehistoric spatial distribution than at other sites we excavated.

I also have concerns about the nature and provenience of the invertebrate faunal record. We encountered a number of fire pits on Pelican Cay. Some of these looked like recent campfires that employed conch shells as a fire ring, while others contained a volume of cracked and charred conch shells. Because I noted in my field journal that “few conch, and very few large conch” were present anywhere on the surface or within the subsurface deposit, it would seem that many conch shells were consumed in lime fires or camp fires on Pelican Cay in the historic era. This activity would obviously skew the invertebrate faunal record. Tangentially, it would also render any charcoal collected from the site too risky to submit for radiocarbon analysis. We recovered a wealth of invertebrate faunal material at the site, and I will discuss it as I have for the other sites we excavated. Yet I do so with the following caveat: I cannot be certain that the quantity and distribution of these materials accurately reflects patterns of indigenous usage.

I have even less confidence in the integrity of the vertebrate faunal record. We observed several fish carcasses on the cay. Some were probably left by birds, but one had clearly been recently filleted by a person with a knife. We also noticed a length of monofilament line with tied fishhook on the ironstone. Based on this evidence and the ethnographic account provided by our young sailor’s father, it is clear that any fish bones found within Pelican Cay’s shallow soils could have made their way into the deposit under any number of circumstances. We collected substantial quantities of vertebrate faunal material, but it has not been analyzed. Even if it had, I cannot assume that it accurately reflects indigenous activity at Pelican Cay. Consequently, I will not discuss the vertebrate faunal record in this analysis.

In conclusion, interpreting the material from Pelican Cay requires a different approach. Data obtained from the site's fish bones and mollusk shells could produce dubious conclusions, but the rest of the material culture is truly compelling and reveals a great deal about how the cay was used in prehistory. It matters not how many people have used Pelican Cay since the 18<sup>th</sup> century, for they did not use Palmetto ware, or Chican or Meillac ceramics, or shell beads, or shell tools, or engraved conch-shell tooth inlays. These were left by the indigenous peoples. Consequently, I focus the analysis of the Pelican Cay material assemblage on these aspects of material culture. In some respects, what follows is similar to an analysis of an old collection one would find in the bowels of a museum or in a trunk in some 19<sup>th</sup> century collector's attic. The provenience may be imperfect, but the material itself speaks volumes about the nature of the occupation.

### **Excavation details**

Pelican Cay was the first site the field school excavated, from May 13-16, 2004. On the first day, our boat trip to the site was delayed until noon by squally weather, and we only had time to clear the area, set up a datum, and lay out our first units. We returned early on the 14<sup>th</sup> and dove into the units we had plotted the day before. The 15<sup>th</sup> was also devoted entirely to excavations, and we completed these by lunchtime on the 16<sup>th</sup>. We logged a combined 38.5 person-days working Pelican Cay before departing for South Caicos on the 17<sup>th</sup>.

We completed six Units, designated "A" through "F" (Figure 6-4). Units A, B, and D were 2 x 2 meters square and Unit C was a 1 x 2 meter rectangle. Units E and F were each 1 x 1 in dimension, but were plotted next to each other so that a 1 x 2 meter Unit was formed. Surface features guided the placement of Units. Unit A was situated in a 4 to 5 meter wide, circle-shaped area near the western end of the site that looked like a potential house floor. Unit B was

positioned at the base of the plateau, near its terminus at the ironstone, in an area with dense surface scatter that was eroding out of the slope. Units C and D were created to explore what looked like small kitchen middens on the northern edge of the site, but turned out to be probable historic-era conch kilns. Finally, Unit E was placed in another 4 to 5 meter diameter round area that had obviously been cleared of rocks and debris. It was quite productive, so Unit F was placed to its immediate east to further explore that portion of the deposit. Together these form a 1 x 2 meter Unit, and they will be discussed as a single entity below.

The plateau upon which the site lies slopes toward the sea from north to south, so all of the Units were positioned on uneven ground. In some cases, the slope was extreme. For example, the starting surface measurements for Unit A were 27 cmbd in the northeast corner and 57.5 cmbd in the southwest corner, for a range of 30.5 cm. Indeed, no unit had less than 20 cm of slope. Moreover, the site's shallow soils meant that some Units had enormous rocks and undulating bedrock protrusions that not only made it difficult to excavate, but also challenged the neophyte student-archaeologists to proceed in level proveniences. To make matters worse, the matrix included more rocks than I have ever seen in a deposit. When it came time to backfill, the rock piles were nearly as large as the screened soil piles. Again, this is likely due to the gradual erosion of finer soil granules by rainfall over time.

All of the Units were excavated by trowel and brush to bedrock. The shallow soils were filled with matrix to limestone, so we did not encounter any Units that terminated at sterile sand. All matrix was screened through ¼ inch hardware mesh. In addition, six 1-liter column samples were obtained from Units A and B. These were pre-screened through the ¼ inch mesh over a clean tarp to remove ceramics, rocks, and other large inclusions, then bagged for future analysis. Our work at Pelican Cay produced 21 field specimen (FS) proveniences. Sixteen of these were

obtained from Units A-F. The remaining 5 FS proveniences were surface collections. Given the shallow soils and the abundance of fascinating material on the surface, we combed over the site and collected as much as we could. These collections did not proceed in formalized spatial units. Given the level of historic activity at the site I did not believe that much could be learned from the spatial distribution of items on the surface. Rather, this material was collected to enhance sample size and provide more robust evidence for which prehistoric groups were using the site over time.

## **Results**

### **The ceramic assemblage**

**Methodology.** The unique physical nature of Pelican Cay and the assemblage itself requires me to approach the ceramic analysis differently than for other sites discussed in this dissertation.

First, the size of the Pelican Cay ceramic assemblage makes it possible to gain useful insights by viewing the distribution of material by sherd count as well as weight. This provides an additional level of analysis that may prove useful in comparing Pelican Cay to other ritual center sites excavated in the future.

Second, the soils are so shallow that a horizontal analysis of the distribution of ceramics by depth would not be very instructive. We discovered Meillacan, Chican, and Palmetto ware ceramics on the surface, and at all points throughout the shallow deposits. There is really no natural or cultural stratigraphy—everything seems mixed together in a fairly compact layer on the bedrock. Therefore, I will not present a horizontal analysis in this section.

Third, all of the recreational activity at the site has likely biased the distribution of ceramics obtained through the surface collections. There is no assurance that these things have

not been moved around over the years. Therefore I omit the surface collection ceramics from the vertical analysis and focus only on those obtained from the Units. I will discuss the surface collections in a separate section after the vertical analysis.

Fourth, the wealth of decorated and otherwise notable ceramics requires special emphasis. For Pelican Cay, I will include a distinct “Decorated and Notable Sherds” section devoted to these ceramics. I break out the special ceramics by subseries, so that notable Chican, Meillacan, and Palmetto ware ceramics are each discussed in turn. I also include a segment for ‘other notable sherds,’ where I discuss sherds with punctations, non-descript lines, and other motifs that are present in more than one subseries, as well as sherds with other unusual characteristics. This section will span the entire assemblage (i.e. all of the Units and the surface collections).

In sum, Pelican Cay is unique, and it requires a refined approach. What follows is a more detailed account of each proveniences’ ceramic materials, which seems appropriate given the nature of the assemblage.

**Overview.** It would be difficult to overstate the density of Pelican Cay’s ceramic deposits, for the volume of pottery we recovered from a few shallow units on this tiny island is truly remarkable. The Pelican Cay ceramic assemblage consists of 582 sherds weighing 4,715 grams (Table 6-1). By weight, the ceramic assemblage from Pelican alone is nearly 1.4 kg larger than the *combined* assemblages from Middleton, Spud, Gibbs Cay, Cotton Cay, and Dove Cay! In fact, nearly 60% of all the ceramics we recovered during the entire field school were collected during our first three days of work. Moreover, all of this material was recovered from less than 2 cubic meters of screened matrix. This is the least amount of matrix we processed at any of the sites we excavated. Sometimes it seemed like some buckets contained as many sherds as rocks.

The assemblage is split almost evenly between imported ceramics and Palmetto ware. Imported ceramics accounted for 51.7% of the assemblage by sherd count (Figure 6-5), and 47.4% of the assemblage by weight (Figure 6-6). These ratios do not change appreciably when the 114 sherds weighing a combined 1,437 grams obtained from the surface collections are excluded. When the remaining 468 sherds weighing a combined 3,278 grams that we obtained from the Units are broken down, imported pottery accounts for 52.4% of sherd count (Figure 6-7) but again, only 47.8% by weight (Figure 6-8). The slight disconnect between the sherd count and weight figures across the assemblage probably reflects the fact that we identified a number of very large and heavy griddle sherds.

**Vertical distribution.** The vertical distribution analysis includes all of the 468 sherds recovered from the six excavation Units. Every Unit A-F produced ceramics, and I discuss the results from each in turn below. For each Unit, I begin by describing its location and association with any features. Next I describe the frequency of imported and Palmetto ware sherds found within the Unit and their proportions to the overall assemblage. These are broken out by both sherd count (Table 6-2) and weight (Table 6-3). Finally, I discuss the frequency of decorated or notable sherds. For clarity's sake I will not provide a detailed review of the specific motifs in this section: that will appear as a cohesive whole in the "Decorated and Notable Sherds" section later on. Ideally, this will help the reader digest the bountiful information by consolidating it all in one place.

Unit A was a 2 x 2 meter Unit. It was situated on the southern half of what appeared to be a circular-shaped aggregation of rocks and ceramic scatter that lay a few meters from the dense stand of sea grape abutting the western edge of the site. The potential midden measured 4.31 m on its east-west axis by 4.01 m on its north-south axis. It was no more than a few

centimeters higher than the surrounding terrain, but clearly had a higher volume of golf-ball sized, fire-cracked and unmodified rocks than the surrounding area. Even so, the deposit was very shallow and exposed bedrock was at the surface in the southwestern corner of the Unit. Overall, the deposit averaged 12.7 cm in depth before terminating at solid bedrock (Figure 6-11). Even though Unit A yielded less than half a cubic meter of matrix, it produced 52 sherds (11.1 % of the assemblage) weighing a combined 357 grams (10.9 % of the assemblage). Of these, 39 sherds weighing 258 grams were from imported vessels. The remaining 13 sherds weighing 99 grams were Palmetto ware. Five of the imported sherds were undecorated rims. Two of these rims displayed a flat top, and there was one each of bevel top, filet top, and flat bevel top. Additionally, there were four decorated or notable sherds. These will be described later in the special section.

Unit B was 2 x 2 meters in dimension. It was located 10 meters southeast of Unit A, near the center of the site's southern boundary. Here the plateau upon which the site lies begins a variably steep descent before it terminates at the ironstone "beach". Consequently, Unit B rested on a grade—the surface measurement below local datum of the northeastern corner of the Unit were 24.5 cm higher than that of the southwestern corner. I chose this place to evaluate the dense surface scatter that had partially eroded out of this slope.

With an average depth of 23.7 cm, the deposit in Unit B was more extensive than in any other excavated Unit at Pelican Cay. Perhaps as a result, Unit B was also many times more productive than any other provenience. Still, the deposits in Unit B are quite shallow when compared to other sites in the region. Moreover, there were large outcroppings of bedrock in the center of the Unit that took up a good deal of the northern half of the Unit (Figure 6-12). The maximum volume of the deposit was approximately 0.948 cubic meters (200 cm X 200 cm x

23.7 cm). Rough measurements of the bedrock outcroppings reduce this figure to about 0.7 cubic meters, which is hardly much volume for a 2 x 2 meter unit. Such is the nature of the deposit at this site.

We obtained a treasure trove of ceramics from this relatively small quantity of dirt. Unit B produced a total of 260 sherds (55.6 % of the assemblage) weighing a combined 1,944 grams (59.3 % of the assemblage). Imported ceramics accounted for 122 sherds weighing 768 grams, while Palmetto ware tallied 138 sherds weighing 1,176 grams. The assemblage included two undecorated, round top imported rims. Five undecorated Palmetto ware rims were also identified, including three with a bevel top and two with a flat top. There are also 22 decorated or notable sherds in the Unit B assemblage, which will be described later.

Unit C was our shallowest and least remarkable Unit at Pelican Cay. It was a 1 x 2 meter Unit located 9.4 meters north-northeast of Unit B. It was placed on a dense surface accumulation of conch and fire-cracked rock to evaluate the possibility that these were part of a deeper midden feature (Figure 6-13). We soon discovered that it was not, and that the deposit was extremely shallow, averaging only 6.2 cm in depth. Indeed, most of this material seemed to be piled up on the bedrock itself. Unit C produced 27 sherds (5.8 %) weighing a combined 189 grams (5.8 %). Of these, 16 were from imported vessels and 11 from Palmetto ware. Most of these were plain body sherds; only one undecorated imported rim sherd with a round top was identified. Two decorated/notable sherds were also recovered.

Unit D was a 2 x 2 meter provenience located 6.3 meters southeast of Unit C and 6.8 meters northeast of Unit B. It was placed directly in the center of a circular cleared area that measured 4.45 meters on its north-south axis and 4.26 meters on its east-west axis. This area was level and devoid of surface rocks (Figure 6-14). It looked as if it might have been the floor

of a structure, and Unit D was designed to test that hypothesis. The deposit in Unit D was nearly as shallow as that of Unit C, averaging only 8.6 cm deep. It produced 33 sherds (7.0 %) weighing a combined 114 grams (3.5 %). Sixteen of these sherds weighing 55 grams were from imported vessels, and the remaining 17 sherds weighing 59 grams from Palmetto ware. One undecorated imported rim with a narrow beveled lip was identified, as was a single notable sherd.

As mentioned above, Units E and F are contiguous 1 x 1 meter units and are best viewed as a single entity. Unit E was positioned 5.4 meters southeast of Unit D and 10.4 meters east-northeast of Unit B in an area with few large surface rocks and a dense surface scatter. Unit F was located to immediately east of Unit E. In spite of a large boulder that obscured a healthy portion of Unit E (Figure 6-15), the combined 1 x 2 meter Unit turned out to be the second most productive provenience at the site. It yielded 96 sherds (20.5 %) weighing a combined 674 grams (20.5 %). Imported ceramics accounted for 52 sherds weighing 370 grams, while Palmetto ware contributed the remaining 44 sherds weighing 304 grams. Two undecorated imported rims with round tops and one plain bevel top Palmetto ware rim were present. Interestingly, a high proportion of the sherds were decorated (14 of the 96), including some of the more finely executed pieces we identified at the site.

**Surface collections.** Five of the FS proveniences were from surface collections. Each corresponds to a general area of the site (e.g. "Surface area north of Unit D"). Still, there has been so much activity on Pelican Cay over the years that I cannot be sure that anything we found on the surface remained where it was left by indigenous peoples. Because the value of this material lies not in its provenience, but what it can tell us about who was using the site, I lump the five together and treat the surface collections as a single entity.

The surface collections accounted for 114 sherds weighing a combined 1,467 grams. Of these, 56 sherds weighing 667 grams were from imported vessels, while 58 sherds weighing 770 grams were Palmetto ware. Among the imported vessels, we identified 7 rim sherds. Two exhibited a round top, two a flat top, one a flat bevel top, one a wedge top, and there was one griddle rim. We also collected two Palmetto ware rim sherds, one with a round top and another with a flat bevel top. The assemblage included 7 decorated or otherwise notable sherds as well.

**Decorated and Notable Sherds.** There are 50 sherds in the Pelican Cay assemblage that fall into this category. Of these, 30 sherds are diagnostic to subseries. Twelve more exhibit punctations, which are common in multiple ceramic traditions. The remaining 8 sherds are notable for other reasons that will be explained below.

Chican imports account for 14 of the 50 sherds in this subset of the assemblage. Eight of these sherds exhibit one or more classic Chican motifs: engraved lines, curvilinear lines, and line and dot motif (Figure 6-16). Five sherds have the chalky white or orange paste common to Chican bottles. One of these bottle sherds also bears a white slip. The final Chican sherd is from an effigy pot fashioned into the form of a human face (Figure 6-17).

Meillacan imports account for 9 of the 50 notable sherds. Four of these sherds bear the familiar Meillacan cross-hatch pattern, and a fifth exhibits the classic alternating oblique parallel line design (Figure 6-18). The remaining 4 sherds were identified as Meillacan by the wet-clay execution of various decorative motifs. Two of these sherds were punctated, another exhibited a vertical parallel line design, and the final sherd was decorated with vertical parallel lines under an appliquéd strip.

Palmetto ware accounts for 7 of the 50 sherds. Five of these are mat marked body sherds from cooking vessels. These are not griddle sherds—the unmarked interior surface is concave,

and they are too thin. Whereas mat marking on griddle sherds is common and thought to be related to the manufacturing process, such marks on cooking vessels are less widespread and have been identified as an intentional form of decoration (Berman and Hutchinson 2000). Another Palmetto sherd was decorated with an incised line under the interior lip of the vessel rim. The final sherd was not decorated, but was notable for its grey paste. None of the other Palmetto sherds we recovered at Pelican Cay was grey, which suggests that its paste may have come from a different source than the rest of the Palmetto ware at the site—perhaps elsewhere in the Bahamas.

The remaining 20 sherds cannot be identified to subseries because they either display motifs common to multiple subseries or are remarkable for some other, undiagnostic reason. Twelve of these 20 sherds are from punctated imported vessels. These cannot be identified to subseries because punctuation is common to both Chican and Meillacan vessels, and on these sherds, punctuation does not co-occur with another, more diagnostic motif. One fascinating aspect of these sherds is the wide variety of ways in which the punctations were executed—there were 9 distinct techniques employed to decorate these 12 sherds. The most common technique employed a cylindrical stylus inserted at a 90 degree angle to the vessel to make a series of “tic-tac” shaped impressions. Four of the 12 sherds exhibited this design. These impressions varied in size from 2-5 mm long by 1-2 mm wide. One of these sherds was from the rim of a serving plate (Figure 6-19). Three other body sherds exhibited single rows of “tic-tac” punctations of various sizes, which appeared to be executed on the vessel shoulder. The remaining eight forms of punctuation execution are summarized in Table 6-5. Although there is not much we can learn from these variable forms of execution at the moment, they do serve to illustrate the many ways in which potters decorated their vessels with punctations. It would be useful to explore the

geographical distribution of punctuation execution techniques in Hispaniola to see if any local or regional trends could be teased from the data.

The final 8 sherds in this subset of the Pelican Cay ceramic assemblage are notable for reasons not covered thus far in this section. All of these sherds were from imported vessels. Two sherds were from small pots with unusually thick walls. One of these was a flat top rim sherd, with walls 11.5 mm thick despite having an orifice of only 6 cm. The other was a body sherd that was highly concave, yet 11.3 mm thick. Two other sherds had a bright red paste that may have been intentionally colored. Among the remaining sherds is a large imported griddle sherd with an incised line, a plain, undecorated rim of a serving plate, a small rim with a single incised line under the exterior lip, and a bottle sherd with the familiar white chalky paste, but also an applied strip affixed to the surface of the vessel.

**Analysis.** The vertical distribution of the material provides some insight into site layout, albeit with the caveat that provenience has likely been impacted by historic activity and post-depositional taphonomy. The excavations paint a picture of a cleared, primary activity area or small plaza in the center of the site, surrounded by a ring of discarded rocks, trash, and debris (Figure 6-20). In the northeast corner of this primary activity area we identified one probable structure floor around Unit D. This Unit was situated in a cleared, circular feature some 4.3 meters in diameter. Although it was a 2 x 2 meter unit, Unit D produced very little ceramic material, as if the floor had been maintained clean. There was a dense surface scatter to the east and north of this feature, suggesting that debris was discarded there and the portion of the site beyond the Unit D structure was not part of the primary activity area. Units A and C were essentially situated on rock piles with a limited amount of ceramics. These lie away from the primary activity area on the western and northern peripheries of the site. This suggests that the

rocks removed from the primary activity area of Pelican Cay were discarded here, to the north and west. Unit B on the southern boundary of the site is clearly situated on a midden/waste disposal area. We recovered the majority of the ceramic assemblage from this provenience. The 1 x 2 meter unit comprised of Units E and F trailed only Unit B in terms of production. These were located on the eastern periphery of the site, in the vicinity of the dense surface scatter observed east of the Unit D structure.

The shallow soils and the lack of any natural or cultural stratigraphy makes it difficult to determine how the site evolved over time. Still, the ceramic assemblage paints a clear picture of who was using the site and when they were there. Obviously, the Pelican Cay occupants maintained close ties to settlements in Hispaniola, for the ceramic assemblage is almost evenly split between imported vessels and locally-made ware. The assemblage also indicates that Pelican Cay was used for a long period of time. Meillacan vessels are well represented in the deposits, which indicates that Pelican Cay was intensively used during the Caicos Islands Meillacan phase. Although no clear transition can be observed in the data, the abundance of Chican and Palmetto ware vessels indicate that the site continued to be heavily used thereafter, up to the contact era and possibly into the early 16<sup>th</sup> century.

The ceramic assemblage tells us much more. However, this data is best viewed in context with other materials and information obtained from the site. I will return to the ceramic assemblage in the “Interpretation of Pelican Cay” section later in the chapter.

### **The faunal assemblage**

**Vertebrates.** An analysis of the vertebrate faunal assemblage has not been completed. We recovered a wealth of marine, terrestrial, and avian fauna from the deposits, but I question if a standard analysis of these remains would be productive. In particular, the fish bones we

recovered are highly suspect. Local residents regularly fish at Pelican Cay, and have for many decades. Sea birds also use the island to feed and roost. Unsurprisingly, we observed at least one fish carcass on the surface of the site that had been recently filleted by a human, and others that were probably bird kills. Because we have no way to separate those bones left by indigenous peoples from those that found their way to the island through other means, there is no assurance that the fish component of the vertebrate faunal assemblage has any integrity.

Analyzing the other vertebrate remains from Pelican Cay could yield fruit, but must be undertaken with caution. Within the subsurface deposit, we identified iguanas, birds, and of all things, the lower leg bone of a sheep or goat. Yet it is difficult to differentiate between those creatures consumed at the site by indigenous peoples and those brought by historic-era or modern picnickers. Caprines clearly were not among the taxa exploited by indigenous peoples, so that is obviously an intrusive item. An analysis of the iguana and bird remains could be more instructive. Pelican Cay is too accessible to have supported endemic iguana populations much beyond the time at which the first peoples reach Middle Caicos, so any iguana remains in the deposits were probably brought there intentionally. Birds were also consumed at other sites in the Turks & Caicos, but of course, they naturally occur on Pelican Cay. Still, if any taxa identified at Pelican Cay are not known to frequent a small cay environment (e.g. the burrowing owl), then one could infer that indigenous peoples brought these to the island for consumption.

**Invertebrates.** The invertebrate faunal assemblage consists of 25 taxa, including 17 mollusks, 6 corals, a sea biscuit, and the West Indian Fuzzy Chiton (Table 6-4). The queen conch (*Strombus gigas*) was the most abundant mollusk, represented by 113 specimens. Of these, 11 were fashioned into one of four tool forms. One of these—a small conch pick from the bottom of Unit B—was retained and submitted for radiocarbon analysis. Interestingly, we only

identified 1.5 liters of cracked, broken conch in the Units. Although most of what we recovered was largely intact, we did observe an abundance of cracked and burned conch elsewhere on the surface. The West Indian Topsnail (*Cittarium pica*) was the second most common mollusk. We counted 79 individuals, and a further 359 grams of pieces. We also observed a good number of conch and topsnail shells among the surface scatter around the site, but there were no definite piles or middens. We did not collect or measure these, given the level of historic disturbance at Pelican Cay. Three other mollusks were well represented in the assemblage. We identified 30 MNI of Tiger Lucine clams (*Codakia orbicularis*), of which 8 showed use wear evidence consistent with employment as scrapers. There were also 25 nerites (*Nerita* sp.) and 10 tellins (*Tellina georgiana*) in the assemblage. Three of the remaining taxa of mollusk are only represented by a handful of specimens. We identified 2 Dwarf Tiger Lucines (*Codakia orbiculata*), 2 tritons (*Cymatium* sp.), and 4 *Oliva* shells, including 3 finished beads. The rest of the taxa were represented by a single specimen. The most notable of these is an Atlantic Pearl Oyster (*Pinctata radiata*), whose mother-of-pearl shell was fashioned into a variety of decorative implements. We also identified one *Olivella* sp. bead, a limpet (*Fissurela* sp.), a Costate Lucine (*Codakia costata*), and three more gastropods: a Carved Star Shell (*Astrea caelata*), a Common Baby Ear (*Sinum perspectivum*), and a Philippi's Nutmeg (*Trigonostoma tenerum*). Finally, we recovered six species of coral. The most abundant was Stag Horn coral (*Acropora cervicornis*) at 889 grams, which included 4 pieces that showed evidence of use wear. We also identified 56 grams of Elk Horn coral (*Acropora palmatta*), 120 grams of Star coral (*Solenastria* sp.), 253 grams of Brain coral (*Diploria* sp.), 303 grams of Boulder coral (*Montastrea annularis*), and 16 grams of Golf ball coral (*Favia fragum*).

**Analysis.** As I have discussed, it would be unwise to divine much from the faunal assemblage at Pelican Cay. Certainly some of what we recovered was deposited there by indigenous peoples, yet there is no way to reliably separate all of the wheat from the chaff.

In contrast, the presence of shell tools is instructive, for these are undeniably prehistoric. A wide diversity of conch shell tools was recovered, including 3 picks, 2 gouges, 2 celts, and 4 hammers. Many more tools were present among the surface scatter, but there were not collected. We also identified 8 Tiger Lucine scrapers, several of which showed heavy use wear. Additionally, we recovered 4 pieces of Stag Horn coral that also showed clear evidence of abrasion.

The shell tools indicate that craft production was taking place at Pelican Cay. This is significant, because it means that the island was not strictly viewed by indigenous peoples as a place to picnic. Many of the tools we recovered have been associated with woodworking activities by other scholars. Both of the conch-lip celts in the assemblage were beveled on one edge, which Jones O'Day and Keegan associate with a "chopping, cutting, [and] woodworking" (2001:277). Moreover, they argue that gouges could be used as a "chopper, planer, adze, or axe" (2001:277). Although they observe that gouges were possibly employed to make dugout canoes (2001:280), it follows that these would also be useful for rough-hewing an initial shape out of any sizeable piece of wood. The conch picks and hammers we recovered have "multiple use potential" and usually show evidence of "Use wear, in the form of battering and chipping due to recurrent impacts" (Jones O'Day and Keegan 2001:284). Indeed, one of the hammers that we recovered had a tip that had been worn down to a nub, presumably through such repetitive pounding action. These smaller, finer tools could have been used to more precisely chip away wood after the initial shape had been hewn out of the raw lumber. Finally, the abraded stag horn

coral and the worn Tiger Lucine shells may have been employed as finishing implements. The rough surface of the coral would make a fine sanding device to smooth out the chipped surface of any wooden article. Indeed, the coral transforms itself from coarse-grit when it is fresh to fine-grit as its surface wears down! Even the Tiger Lucine shells have a sharp enough edge to shape, smooth, and polish wood with a whittling action. However, these have traditionally been thought of as fish scalers and tuber peelers (Jones O'Day and Keegan 2001:288), and it is certainly possible that they were employed in that capacity at Pelican Cay.

### **Other cultural material**

Compared to other sites we excavated, Pelican Cay yielded a remarkable paucity of other cultural material. We identified only a single conch-shell bead blank and a single smooth, oval-shaped piece of limestone that might be a polishing stone. The lack of any appreciable evidence for bead production stands in stark contrast to all of the other sites we examined. Even small-scale outposts like Gibbs Cay and Cotton Cay had far more substantial evidence for bead production than Pelican Cay. This fact suggests that shell bead manufacture was not a significant craft activity at Pelican Cay.

### **Radiocarbon chronology**

I obtained one radiocarbon date from Pelican Cay. It was obtained from a small conch pick that was recovered from Level 3 of Unit B, where it sat directly on the bedrock. It was selected for dating because of its clear indigenous cultural affiliation and location at the bottom of the most productive Unit we excavated at the site. Although we recovered a good amount of charcoal from the Units, I was loath to submit any of this material given the number of historic-era campfire pits and conch kilns on the island. It seemed a lot safer to date a diagnostically “Indian” artifact from the bottom of the indigenous deposit. The sample was submitted to Beta

Analytic for standard radiometric analysis, and was calibrated and adjusted for local reservoir correction. It was assigned designation Beta 242675, and the intercept of the radiocarbon age with the calibration curve occurred at Cal AD 1050 +/-50, with a two-sigma range of Cal AD 980-1180 (Appendix C).

**Analysis.** The radiocarbon date from Pelican Cay implies that the island has a deep history that began around the middle of the 11<sup>th</sup> century. Additional evidence from the ceramic assemblage at Pelican Cay strongly suggests that it was actively exploited by indigenous peoples for many centuries thereafter, right up to European contact and perhaps beyond. As such, the site was contemporaneous with other settlements on Middle Caicos throughout its tenure. Because the people who used Pelican Cay probably did not live there permanently, it is important to consider Pelican Cay in context with these neighboring settlements. These sites are where the people who used Pelican Cay lived the rest of the time, and comparisons between them will shed light on how and why Pelican Cay was used, and by whom. There are three sites of significance, all of which have been described in detail elsewhere in this dissertation. The nearest is MC-32, which lies adjacent to the beach only 900 meters southeast of Pelican Cay. MC-32 was occupied from the middle of the 13<sup>th</sup> century until after contact. The next nearest site is MC-12, which is located adjacent to the beach 2.45 km west-southwest of Pelican Cay. MC-12 has been radiometrically dated to AD 1040 (Carlson 1999:144) and was also occupied up to contact. Finally, there is MC-6. It is the largest and most complex site on the island, but is located on the south coast of Middle Caicos some 5 km from Pelican Cay. Still, it maintained social and economic ties with both MC-12 and MC-32, and consequently must have played a role in the activities at Pelican Cay.

## **Interpretation of Pelican Cay**

Inherent biases in some of the data from Pelican Cay somewhat limit an interpretation of the island. As I have already lamented, the faunal record is particularly problematic. Still, it would be helpful to compare relevant aspects of the Pelican Cay faunal record to that of MC-32, MC-12, and MC-6. As discussed in Chapter 2, the people on the north coast of Middle Caicos exploited a different set of resources than their counterparts at MC-6 on the south coast of the island. It would be illuminating to learn if the faunal items consumed at Pelican Cay were primarily collected from the northern coastal zone of Middle Caicos, or if taxa from the southern coastal zone were represented in any appreciable quantity. If my assumption that some residents of MC-6 were also using Pelican Cay as part of the island-wide social network is correct, then one might expect to find a higher incidence of southern coastal zone taxa at Pelican Cay, transported in by visitors from the south side of the island. It would also be helpful to know if the assemblage included a disproportionate amount of “status” food items like iguana, birds, and turtle.

## **The ceramic assemblage**

The sheer volume of ceramics, the high ratio of imported vessels to Palmetto ware, and the abundance of decorated and specialty vessels clearly indicate that the site was not a simple outpost frequented by small, itinerant groups of fishermen, but something more intensive and socially significant. Below I address each of these points and hypothesize on their significance.

The first and perhaps most obvious interpretation is that people used a lot of pottery at Pelican Cay. Ceramic densities exceed that of any other site we examined in this project. Yet the island, and indeed the site itself, are tiny in comparison. The primary activity area is no more than 20 x 12 meters, and we identified only one probable structure at the site. Clearly, there is

not enough space to support a population of a magnitude that would have required so many vessels for daily use. The only alternative is that the pots were all transported to Pelican Cay for some special purpose beyond satisfying the daily, pedestrian needs of a necessarily small group of inhabitants. I argue that this is strong evidence of recurrent ritual feasting at Pelican Cay.

The term “feast” has many definitions within anthropology (Dietler and Hayden 2001:3). However Hayden (2001:28) captures it nicely as “any sharing between two or more people of special foods (i.e. foods not generally served at daily meals) in a meal for a special purpose or occasion.” Granted, the limited faunal data do not permit conjecture about the kinds of foods served at Pelican Cay vis-a-vis those consumed at the neighboring domestic settlements. Nevertheless, it is certain that food consumption on the island was part of a “special purpose or occasion.” The ceramics were not for daily use: people could not have lived on the island permanently, and must have visited Pelican Cay sporadically for specific reasons. In doing so, they transported massive quantities of cooking and serving utensils—and by extension, the foodstuffs contained within—specifically for use and consumption on this little rock 650 meters offshore. Because there is no ecological or strict economic reason mandating this behavior, this deliberate act indicates that food consumption at Pelican Cay had a purpose beyond satisfying one’s daily caloric requirements. That purpose could only have been social in nature, and periodic, socialized food consumption outside of the daily, domestic realm should be enough to meet any anthropological criteria for “feasting.”

More specifically, the archaeological evidence from Pelican Cay corresponds neatly with several of Hayden’s “Archaeological Signatures of Feasts” (2001:40) that he compiled from a vast, global corpus of ethnographic and archaeological evidence. We identified “Unusual numbers” of vessels, an “Unusual quality” of vessels in the form of a high ratio of imported to

locally-produced wares and a high ratio of decorated pots, and an “Unusual number of serving vessels” not seen at other sites in the area (Hayden 2001:40). Furthermore, the island itself fits Hayden’s “Special locations” criteria: “Mortuary or remote locations that clearly are not habitation sites (e.g. in front of Megalithic tombs, at henge monuments, inside caves)” (2001:40). Given its size, Pelican Cay is clearly not a habitation site. However, its location near to—yet separate from—the main settlements on the north coast of Middle Caicos must have imbued it with a certain mystique.

If feasting took place at Pelican Cay, then who was on the guest list? The second interpretation offered by the ceramic assemblage sheds light on this question. The Spanish chroniclers noted that ceremonial feasts were frequent, and occurred in conjunction with all manner of observances and events. Caciques organized the affairs, and a visiting potentate was always feted as a guest of honor. Columbus himself was treated to a “welcoming” feast hosted by Guacanagari the day after the *Santa Maria* was wrecked (Morrison 1942:303), which in hindsight must be one of history’s greatest ironies. From these accounts, it follows that the local elites were feasting at Pelican Cay, and this is borne out by the archaeological evidence.

The first line of evidence for elite feasting comes from the ratio of imported ceramics to Palmetto ware. Before I discuss the particulars of this fact, it is useful to explore how imported ceramics are associated with elite status in the region. Among the Taino, there was a pronounced difference in the ceramics used by elite and non-elite households. Elite households had many more pots, a wider variety of kinds of pots (such as serving vessels), and more decorated pots than their non-elite counterparts (Deagan 2004:614). Therefore, the people who migrated to the Turks & Caicos from Hispaniola brought with them a concept of elites’ expanded and preferential access to some kinds of ceramics. Over time this concept evolved its own form of

expression in the Bahama archipelago, influenced by the advent of locally produced Palmetto ware and the logistics of obtaining Hispaniolan ceramics. After Palmetto ware is incorporated into the local material culture, there is no pressing economic need to acquire pots from Hispaniola in order to feed oneself. Indeed, if ceramics were purely functional aspects of subsistence, then we could reasonably expect to see virtually zero Hispaniolan pottery at Bahamian sites beyond the 14<sup>th</sup> century. Yet imported pots are found at every sizeable settlement in the Turks & Caicos from that time period. Thus, imported ceramics evolved from filling daily utilitarian needs to meeting social ones. They become symbols that help replicate important aspects the Hispaniolan worldview, and tangibly demonstrate cultural ties with ancestral groups and current trading partners (see Sinelli 2001). Because they are special, rare, expensive, and difficult to obtain, not everyone in Lucayan society will enjoy equal access to imported ceramics. Indeed, those who control trade (i.e. the elites—see Chapter 4) also control how these materials are allocated in the Turks & Caicos. These elites are also primarily charged with maintaining and replicating the social order, via their roles as chiefs and holy men, which grants them stewardship of both the real and supernatural realms. As imported pots became socially-charged items, it is natural that the social stewards would control and employ these as they had other symbols of natural and supernatural power and authority. Thus, imported ceramics of any kind became linked with elite status in the southern Bahama archipelago.

Even so, this measure is temporally dependent and cannot always be interpreted as evidence of an elite presence in the Turks & Caicos. For example, the ceramic assemblage at site MC-8/MC-10 on the south coast of Middle Caicos is comprised of more than 98% imported vessels, yet no one believes that this was the seat of a powerful chief. Rather, the site was occupied by migratory Hispaniolans at a time when Palmetto ware was not widely employed in

the region. The assemblage consists of imported vessels because other alternatives simply were not available and pots brought from home were sufficient to see them through their brief sojourn. As such, the relationship between imported vessels and an elite presence can only be assumed for later settlements. Pelican Cay and all its associated sites have occupation horizons that date to this timeframe.

The ceramic assemblage at Pelican Cay includes a high ratio of imported ceramics to Palmetto ware. By sherd count, imported ceramics account for 51.7% of the subsurface, excavated assemblage. Recall that Pelican Cay was contemporaneous with three other sites on Middle Caicos. MC-12 was established around the same time as Pelican Cay (AD 1050 and AD 1040, respectively) and was occupied until contact. Yet imported ceramics were never a significant part of the assemblage at MC-12, even in the 11<sup>th</sup> century. Although a small number of both Meillacan and Chican sherds were identified at the site, “it is apparent that 95 percent of the pottery was Palmetto ware” (Keegan 2007:90,139). Site MC-6 was occupied from the 15<sup>th</sup> century through contact and into the 16<sup>th</sup> century. Excavations at MC-6 produced a result similar to that at MC-12: “the vast majority of the pottery (94%) is undecorated and locally made Palmetto ware” (Keegan 2007:184). Although some highly decorated Chican sherds were identified, Hispaniolan ceramics were not widely employed. Even more precise data are available for MC-32. The earliest deposits at the site date to AD 1290, and the presence of Old World rat bones indicate it was occupied through the contact period (Keegan 2007:164,168). MC-32 is the closest site to Pelican Cay, and certainly, many of the people who used the site must have hailed from there. Perhaps unsurprisingly, the ceramic assemblage at MC-32 is more similar to that of Pelican Cay than any of the others. MC-32 has a higher incidence of imported pottery, with Meillacan and Chican sherds accounting for 19.7% of the subsurface excavated

assemblage (Sullivan 1981:296, Keegan 2007:167). Still, 4 out of 5 sherds at this site were locally-made Palmetto ware. In sum, the unparalleled abundance of imported ceramics at Pelican Cay strongly suggests that elite persons from neighboring sites were using the island for periodic feasts. No other post-14<sup>th</sup> century site on Middle Caicos has such a high proportion of elite-privileged ceramics.

The third interpretation gleaned from the ceramic assemblage further supports the premise that Pelican Cay was the site of elite feasting. Pelican Cay has not only a higher occurrence of decorated imported vessels, but also a high incidence of imported vessel forms used exclusively by elite households. At En Bas Saline, Deagan recovered more than 70,000 Chican sherds from contexts ranging from the 13<sup>th</sup> century to the early 16<sup>th</sup> century. She discovered that between 6 and 7% of the sherds were decorated (Deagan 2004:612). Given the size of her sample, this could be construed as a “baseline” rate at which local potters decorated their vessels. Because this is also the region of Hispaniola with which the Caicos Bank settlements were affiliated, it is also reasonable to assume that this baseline rate would have applied to vessels being transported from Haiti to these sites in trade. The fact that this figure is nearly in line with the ratio of decorated sherds at Middleton (8.8%) and Spud (7.6%) seems to support his hypothesis. Remarkably, the frequency of decorated imported sherds at Pelican Cay is 12.3%—nearly twice the baseline rate, and well in excess of figures observed at other contemporaneous Caicos Bank sites. Moreover, this figure does not include five mat-marked body sherds of Palmetto ware we recovered, which are similar to those described by Keegan at MC-32 (2007:168). The higher incidence of decorated pottery at the site supports the notion that it was used by elite individuals who enjoyed differential access to these materials. Furthermore, there were a number of special-use vessel forms at Pelican Cay that Deagan only identified in

elite contexts and households: “Boat-shaped bowls, platters, and small round bowls are absent from the non-elite household and were probably associated with consumption or specialized functions unrelated to food preparation” (2004:615). We recovered rim sherds from 3 boat-shaped bowls, 2 platters or plates, 2 small round bowls (diameter of orifice = 8 cm), and one very small round bowl (diameter of orifice = 6 cm) with unusually thick walls (11.5 mm). We also identified part of an effigy pot that was formed into a stylized human face. Because these vessel forms are not only associated exclusively with elites, but also are “associated with consumption or specialized functions,” the implication is clear. Elite members of Middle Caicos society were visiting Pelican Cay periodically to feast.

Now that I have hopefully demonstrated that Pelican Cay was the site of elite feasting, it is important to consider the reasons behind this behavior. Why did Middle Caicos elites periodically gather at Pelican Cay for ritual food consumption? Although Deagan observed that “The social functions of ritual feasting among the Taino are not yet well understood (2004:619), Hayden’s synthesis makes it possible to understand the social significance of elite feasting at Pelican Cay.

On the surface, feasts are expensive, time consuming, and somewhat frivolous affairs. However, in indigenous societies, feasts are more of an investment than an expenditure: “Feasts are techniques for *transforming surpluses* into socially, economically, and politically useful currencies that can be used to further individual and group self-interest and survival” (Hayden 2001:58, emphasis his). Therefore, feasts are “adaptive”; a means to an end, a vehicle through which social relations within and between groups are negotiated. Thus, in indigenous societies, feasts are necessary. They are a “behavior that has some practical benefits” and pays dividends in excess of the initial outlay in labor and resources, which in many cases can be considerable

(Hayden 2001:24). In this vein, I argue that the elite feasts held at Pelican Cay played a critical role in maintaining the social order necessary to sustain the export-based prehistoric economy of Middle Caicos.

Hayden (2001:29-30) lists nine “basic types of practical benefits” reaped from feasting:

1. mobilize labor
2. create cooperative relationships within groups or conversely, exclude different groups.
3. create cooperative alliances between social groups (including political support between households)
4. invest surpluses and generate profits
5. attract desirable mates, labor, allies, or wealth exchanges by advertising the success of the group
6. create political power (control over resources and labor) through the creation of a network of reciprocal debts
7. extract surplus produce from the general populace for elite use
8. solicit favors
9. compensate for transgressions

Not all of these are equally relevant in the Pelican Cay equation. For example, there is no way to know if feasts on the island were initiated to apologize for some slight or misdeed. However, the nature of the relationship between residents of MC-32 and perhaps MC-12 on the north coast of Middle Caicos and MC-6 on the south coast strongly implies that some mechanism for negotiating social obligations would have been present. Logically, the elites would be the ones handling the negotiations. Their efforts would ensure that the status quo was maintained.

Keegan contends that the residents of MC-32 were social and economic equals to those at the much larger MC-6: “we do not need to conceive of their relationship as one of corvee labor in which people from MC-32 were conscripted...they may have been full partners” (2007:170). If so, then elite feasting at Pelican Cay might have been employed to maintain the unique Middle Caicos economic system to everyone’s benefit. From the MC-32 perspective, remaining “full partners” ensured that people living on the north coast of Middle Caicos did not become mere

vassals of their larger and more powerful southern neighbor. It also preserved the link between north coast settlements and the lifeline to the ancestral Hispaniolan homelands. The residents of MC-32 clearly valued their ties to Hispaniola, for “MC-32 shows the strongest affinities to Hispaniola of any Lucayan site” (Keegan 2007:168). This would be a powerful incentive for the residents of the north coast to maintain cordial social relations with those in the south, for the elites at MC-6 controlled the flow of Hispaniolan goods into the region. From the MC-6 perspective, harmonious relations ensured that they continued to enjoy access to the resources over which north coast settlements had exclusive control (e.g. reef and pelagic fish). It would also guarantee that calls for labor from MC-32 during the brief time salt was available for harvest on Armstrong Pond were not ignored. This interpretation fits with Hayden’s assertion that “establishing desirable social relations constitutes the bottom line for many feasts” (2001:30). In sum, good social relations among the Middle Caicos settlements assured an economic win-win for everyone involved.

Feasts organized by north coast elites for their south coast associates could create a reciprocal debt obligation that enhanced the power and social standing of the hosts. Hayden observed: “In terms of feasting, one of the most powerful enforcing criteria is the acceptance of a contractual debt when one accepts an invitation to a feast intended to create social bonds or reciprocal obligations. Debt relationships also prolong and maintain the “status” associated with gift giving because the “superior” status is active as long as the gift has not been repaid” (2001:35). Essentially, elite feasting at Pelican Cay propels the north coast elites to first among equals until the favor is returned at MC-6 and the cycle renews. Presumably, this dynamic of alternating power relations would continue as long as everyone returned a proper feast with a proper feast.

The social relations negotiated between the north and south coast settlements of Middle Caicos through elite feasting would have been multifaceted, and mesh nicely with several of Hayden's (2001:29-30) nine "practical benefits." Feasts would create and maintain the overarching "cooperative relationships" and "alliances" that facilitated more mundane aspects of social relations. For example, as "partners," people from the north coast would be expected to contribute their labor and resources to facilitate the lucrative export trade with Hispaniola that operated out of MC-6. Feasts would also provide an opportunity for residents of multiple villages to negotiate marriage arrangements in accordance with their exogamous social norms. Marital ties between villages, particularly among the elite, would further cement the mutually beneficial partnership among the Middle Caicos settlements. Such alliances were an intrinsic part of the avunculocal residence pattern practiced by the Taino (Keegan and MacLachlan 1989).

In sum, Pelican Cay as a venue for elite feasting played a critical role in maintaining the social and economic fabric of Middle Caicos society. It is clear from the ceramic assemblage that special people were using this tiny island for special occasions that facilitated the negotiation of power between the various Middle Caicos settlements. But Pelican Cay was not simply a banquet hall for local power brokers. I now turn to other aspects of the archaeological record to explore other ways in which the cay was used, all of which were equally important to daily life elsewhere on Middle Caicos.

### **The shell tool assemblage**

As discussed above, many of the shell tools we identified in the deposits at Pelican Cay are thought by scholars to be wood-working implements. Why was there a woodworking industry on Pelican Cay, what does this tell us about how Pelican Cay was used, and how does this relate to elite feasting on the island?

Feasts are not only about food. They include a broad array of other material, which is incorporated into the festivities and is in many ways as important to the ritual as the meal itself:

Food is not the only material item, however, whose production is intensified for communal ceremony. Feasting may create demands for larger cooking and more elaborate serving vessels. In addition, the need for ceremonial garments and ornamentation, as well as demands for other social valuables used or displayed in ceremonial contexts, creates demand for material goods that are met through economic intensification (Spielmann 2002:197).

I argue that the woodworking tools we recovered from Pelican Cay represent craft production of ceremonial items that were critical components of not only the feasts that took place on the island, but also other ceremonial activities on Pelican Cay and at other communities. I also propose that these activities were carried out at Pelican Cay because of the island's perception as a special/sacred place among the local residents made it the appropriate venue in which to construct symbolically charged items, and that such items would carry additional symbolic heft by virtue of their manufacture at Pelican Cay.

It is appropriate to begin with a brief overview of Taino wooden artifacts. The Taino were expert woodworkers and crafted a variety of important ceremonial items such as wooden seats known as duhos and cemis (see Bercht et al 1997 for many wonderful photos of their art). Importantly, it is known that many of these were manufactured in the Bahama archipelago, and were not all acquired from the Greater Antilles (Ostapkowicz 1997). Indeed, the Turks & Caicos had a well developed woodworking industry with its own unique style: “The exceptional duho...from an unprovenienced cave in the Turks & Caicos Islands bears testimony to the high caliber of Taino/Lucayan woodworking skill” (Ostapkowicz 1997:63). The precision with which wooden items were made suggests that dedicated craftspeople were in charge of production, and that these craftspeople were enjoyed elevated social status: “The extraordinary skill [and] the

amount of labor investment entailed...would certainly lend further credibility to the existence of craft specialists...It is possible to suggest that caciques and cacicas became patrons to skilled artisans, and that this association may have brought with it particular status and privilege for both parties" (Ostapkowicz 1997:66). Furthermore, it appears that gender did not factor into the production, ownership, and distribution of wooden items, and that elite men and women had comparable access to and control over the items (Ostapkowicz 1997:66).

Functionally, wooden items played important roles in ceremonial life. Cemis representing deities from the Taino pantheon, ancestors, and cosmologically important animals were carved from wood and other media, and were employed at both the household and collective level (Arrom 1997, Roe 1997). Yet perhaps the most circumscribed and socially charged wooden items were the duhos. Duhos were status items reserved for certain important people, and fulfilled critical aspects of social ceremonial performance:

Duhos were used during important ceremonial occasions, and their presence separated their high-ranking owners from the rest of the community, marking them as distinct. An indispensable part of ritual paraphernalia, the duhos were intimately linked to hallucinogens and communication with numerous powers. The often elaborate carvings of the duhos represented zemis and ancestors, visually and symbolically supporting the seated individuals and lending authority to their position and status. (Ostapkowicz 1997:56)

Duhos are also associated with ritual feasting:

Duhos were an important component of Taino ritual contexts, and prestige and power were intimately linked with their use. Such socially and politically charged events as the greeting and feasting of foreign dignitaries, allies, and kin presented opportune times to emphasize the status of the hosts. (Ostapkowicz 1997:63)

Some wooden cemis and duhos were inlaid with other materials. The Turks & Caicos duho described earlier exhibited "facial features and shoulders [that] are deeply carved for the

inclusion of gold, stone, and shell inlay” (Ostapkowicz 1997:63). During our test excavations at Pelican Cay in 1999, we recovered a shell tooth inlay “made from conch shell and cut to represent teeth; it would have been fitted in the mouth of a wooden idol” (Keegan 2007:161).

Given the role that wooden items played in social relations, one would expect that such items were employed at a socially significant place like Pelican Cay. The tooth inlay we recovered in 1999 supports this idea and indicates that some large, ornate, wooden ceremonial item was present on the island. It may have been an idol, as Keegan suggests (see Arrom 1997: Plate 54 for a shell tooth inlaid cemi statue). If so, the item may have been incorporated into shamanistic or other ritual ceremonies executed on the island (see Roe 1997 for a thorough description of these ceremonies). Alternatively, the inlay may also have been affixed to a duho (see Ostapkowicz 1997:Plate 45 for a shell tooth inlaid duho). If Pelican Cay was the site of elite ritual feasting, it certainly follows that status items that are directly associated with these activities, like duhos, would have been employed by chiefs at the site. Moreover, duhos were used by behiques in the cohoba ritual, in which the Taino shamans communicated with the supernatural realm. After preparing himself through ritual purification and ingesting narcotics, “the Taino shaman ‘centered’ himself on his carved wooden duho as a human axis mundi elevated above the earth plane...From that hunched position, he called the world of the spirits into being through the force of his thoughts” (Roe 1997:141). Whether the inlay was affixed to duho or cemi, its presence at Pelican Cay adds credence to the idea that this was a special island where chiefly and shamanistic activities took place.

Let us return to the woodworking tools. Why would Pelican Cay be an appropriate place to manufacture these ornate wooden artifacts, or “socially valued goods” as Spielmann (2002) has termed them? Spielmann cites a wealth of ethnographic and archaeological data

demonstrating that where an item came from, or where it was made, frequently enhances its social value (2002:199-200). As a consequence, there can be a widespread demand for socially valued goods from a particular provenience. Those that control production of these socially valued goods at a particular provenience sometimes intensify production of such crafts in order to satisfy this broad societal demand. Therefore, valuable items are frequently produced in surplus, so they can be traded and circulated throughout the broader society (Spielmann 2002:201).

The archaeological evidence indicates that Pelican Cay was ritually charged. As such, wooden prestige items produced there could have been imbued with additional social significance. Although wooden items like cemis and duhos were needed to satisfy the ritual needs of the north coast settlements of Middle Caicos, these needs would have been quite limited given the small size of the settlements. It is more likely that wooden items produced at Pelican Cay were traded across a broader geography, perhaps even to settlements in Hispaniola, where the geographical distance from the exotic, magical source would have only enhanced their value. Perhaps this is why the material culture at MC-32 has a greater affinity with Hispaniolan settlements than any other village in the region. The socially valued goods they crafted at Pelican Cay would command a princely sum in trade from the elites of Hispaniola.

Finally, there is some analogical evidence that wooden prestige items were themselves manufactured within a ritual context. Based on the high volume of craft item “production by-products” recovered from a 13<sup>th</sup> century feasting pit at En Bas Saline, Deagan hypothesized that “the production of implements and craft items for ritual feasting or exchange was incorporated as part of the...event.” The data from Pelican Cay are insufficient to know for certain if woodworking was executed in a ritual context, for wood “debitage” does not survive in this

archaeological context. Still, we have the woodworking tools. If Pelican Cay was a sacred place, then by extension, activities at the site would be limited to those that had a certain social significance. Thus, if socially valued wooden items were being produced on the island, it could only have occurred within this sacred context. Basically, everything that happened at Pelican Cay was special, be it an elite feast designed to negotiate local power relations, a shamanistic ritual, or the production of socially valued wooden items for distribution around the region.

### **Concluding thoughts on Pelican Cay**

Pelican Cay is an archetype for the “Ritual Center” site. People did not live here, but used the site for socially important activities. Why was this little island used this way? Viewed from the beach, Pelican Cay appears as earth suspended between sea and sky (Figure 6-1). This makes it a literal, physical manifestation of the three layers of the Taino cosmos, as described by Siegel (1989, 1997): “Like many other pre-Columbian cultures of the Americas, the Taino worldview was based on a concentric model of the universe, with three distinct layers representing various planes of reality. The earthly plane, in the middle, was surrounded by a celestial vault above and subterranean waters below” (Siegel 1997:108). These realms were linked by an “axis mundi” which connected “the various spheres, or layers, of the cosmos” (Siegel 1997:109). A shaman, “as the intermediary between the human group and the spirit world, travels along the axis mundi between the various layers of the cosmos” (Siegel 1997:108). By virtue of its location as earth between sea and sky, I argue that Pelican Cay was the axis mundi that, in the local worldview, connected all three aspects of the universe.

Siegel’s synthesis of the Taino worldview is based upon ethnographic, ethnohistoric, and archaeological data from the Amazon basin and the Greater Antilles concerning the Tainos’ South American and Saladoid ancestors. Among these cultures, the axis mundi is typically

manifest at the center of something: a single structure, a cluster of structures, or perhaps something at the center of the village itself, like a cemetery or plaza. The circular layout of contemporary Amazonian settlements and archaeologically documented Puerto Rican villages he discusses supports this notion, where the center and its axis mundi represents sacred space, and the periphery profane space (Siegel 1997:109). However, these are landlocked settlements, and none were positioned on smaller islands like those in the Bahama archipelago. On Middle Caicos, the sea is far more accessible than in Amazonia or most of Puerto Rico, and is no more than a couple hours walk from any point on the island. Consequently, indigenous peoples were able to adopt a more precise expression of the axis mundi—one that literally linked earth, sea, and sky to even the most casual observer—rather than relying exclusively upon other constructs in the absence of regular access to the sea. Individual households and villages in the Bahama archipelago may have had their own axis mundi, but in some cases, the paramount link between the three realms could be found just offshore. In this regard, small near-offshore islands like Pelican Cay may have been proxies for caves, which played a prominent role in Taino mythology (Pane 1999:5-6) and had sacred meaning as conduits to the underworld (Stevens-Arroyo 2006:183).

As the axis mundi linking the three realms of the cosmos, Pelican Cay would have been the epicenter of sacred space. Siegel contrasts sacred space from profane space in this three-tiered worldview as follows:

There exists throughout the Amazon basin a constellation of attributes that characterize the sacred and profane realms of the cosmological landscape. The sacred is marked by such features as center of house, center of village, men, social life, ritual activity, food consumption, cooked food, and hallucinogenic beverages. This contrasts with the profane, which is represented by house periphery, village periphery, women and children, domestic life, nonritual activity, food production, and raw food. (1997:109).

The archaeological evidence from Pelican Cay places the island squarely within Siegel's definition of sacred space. The ceramic assemblage indicates that much food was consumed, and the high incidence of specialized vessels, effigy vessels, and serving vessels suggests that much food was being cooked elsewhere for consumption on the island. The shell tooth inlay indicates that ritual activity, perhaps including the ingestion of hallucinogens, occurred at the site.

Although there were exceptions (Ostapkowicz 1997), these activities were largely the purview of men—caciques were usually men, as were shamans (Roe 1997:138). Finally, Pelican Cay was separate from the primary settlements, where the “women and children, domestic life, nonritual activity, food production, and raw food” associated with the profane were ubiquitous.

In conclusion, all of the evidence points to Pelican Cay as a sacred place used by elite residents of the north shore settlements on Middle Caicos and their guests. It appears that the island was the venue for elite feasts, shamanistic rituals, and the production of symbolically significant special value items. Based on its location, the island was viewed by the local populace as the axis mundi which linked their real world to other planes of the Taino cosmos. Clearly this is an important site. It tells us a great deal about the social order of the prehistoric Turks & Caicos Islands, and offers insight into broader settlement strategies that should be pursued elsewhere in the West Indies.

### **Dove Cay**

#### **Data**

##### **Physical description of Dove Cay**

I described the physical nature of Dove Cay in Chapter 2. There is no need to repeat that discussion here, so I will turn to the description of the site itself.

## Description of the Dove Cay site

Unlike Pelican Cay, the Dove Cay site is unremarkable when viewed from the surface. The only detectable portion of the site is located on the northern side of the somewhat flat, 40 by 25 meter, interior of the island. This region sits between 3 and 6 meters above the water, and slopes precipitously toward the sea at its periphery (Figure 6-21). The only observable surface evidence primarily consists of a darker anthrosol that contrasts with the whiter, sterile sand that covers the interior. A minimal deposit of fire-cracked limestone and broken conch parts is eroding out of the eastern periphery of this area and down the slope (Figure 6-22). This is the area where Winn Phillips identified the twin pot. Additional areas of light surface scatter were detected westward of the eroded deposit. Interestingly, none of the surface scatter included any ceramics, but was dominated by fire-cracked rock, broken conch bits, and the occasional expedient shell tool. Additionally, a modest conch pile sits near the island's western tip adjacent to the beach (Figure 6-23). It contained both punched and modern-killed conch in roughly equal numbers. A map of the island and these features appears in Figure 6-24.

## Excavation details

Although we visited Dove Cay on three separate occasions, conditions conspired against us and we were not able to complete much work there. Our first visit was late on May 22, 2004, when we conducted the survey, identified the site, and discovered the twin pot. Although we were there for less than 2 hours, this was arguably our most productive day on the island. We returned the next morning, May 23<sup>rd</sup>, to begin test excavations, but were only able to enjoy a few hours of work before the weather deteriorated. Rising winds and fast-moving black clouds ahead of a tropical disturbance forced us depart around 11 AM. Torrential rains and dangerous winds marooned us on South Caicos for the next two days, and we were not able to return until the

morning of May 26<sup>th</sup>. Even though the weather was pleasant, the archaeology was unproductive and I decided to abandon Dove Cay after lunch in favor of more promising work at Middleton. As such, we only spent 1 full day at the site, accounting for 11 person-days of work.

We completed two 1 x 1 meter Units on the northeastern and northwestern corners of the flat interior area (Figure 6-25). Unit A was situated in the northwestern corner on an area of surface scatter. Unit B was placed approximately 18 meters to the east, in the northeastern corner of the flat area. It sat on a level grade directly adjacent to the slope that the material had been eroding down. I also executed two 50 x 50 cm Test Units 150 cm north of Unit B, on the slope with the eroding deposit, where the twin pot was recovered. These formed a small trench that I named Unit C.

When we began on the 23<sup>rd</sup> we set about placing the 1 x 1 meter Units where we observed some surface scatter. We immediately noticed that the upper stratum was sterile beach sand, but proceeded carefully with trowels and brushes. While most of the team began excavating the Units, I took three students to the windward side of the island to investigate a small cave we discovered during the survey. Because the presence of the twin pot suggested that Dove Cay was a special place, I wanted to determine if the cave had been used in prehistory. The mouth of the cave was filled with rocks (Figure 6-26), but we managed to clean it out and dig a shovel test (Figure 6-27). A note in my field journal succinctly describes our reward: “Finished moving several thousand pounds of limestone and dirt. No burial—natural formation” (Figure 6-28). When we were finished we returned to the main excavation areas, but the weather had begun to turn and we left shortly thereafter. The teams excavating the Units hardly fared better in our absence—they had not yet breached the sterile overburden and had discovered nothing but rocks and a handful of conch parts in the screens.

When we returned three days later we brought shovels to accelerate our progress through the sterile overburden. We screened this material anyway, but recovered nothing that was identifiably cultural. Indeed, neither Unit produced anything in Level 1 beyond the few scraps of fire-cracked rock and conch pieces on the surface. However, we observed a distinct change in soil structure below this sterile stratum. For Unit A, it occurred between 45 and 51 cm below the surface. It was shallower in Unit B, occurring between 28 and 42 cm below the surface. This change in the natural stratigraphy suggested that we had finally reached the deposit, so I terminated Level 1 and initiated Level 2. At this point we also set aside the shovels and resumed excavations with trowels and brushes.

The darker soil in Level 2 proved almost as sterile as the matrix above it. In both Units, the Level 2 matrix began as very dark, and the contrast was immediate and obvious. As we proceeded through Level 2, the matrix gradually lightened to a grayish color, and eventually terminated, again abruptly, at yet another layer of pure white sterile sand. Although the stratigraphy suggests that some human activity was responsible for the abrupt shifts in soil constituents, we recovered virtually nothing in this Level 2 for either Unit to confirm that the feature was truly anthropogenic.

Unit C, which consisted of two contiguous 50 x 50 cm square units plotted down the slope as a trench (Figure 6-29), was only slightly more productive. The upper 50 x 50 produced dark soils from the surface to between 40 and 50 cm, but yielded very little. The lower 50 x 50 contained darker soils through the first 10 cm, then abruptly transitioned to white, sterile sand. It also produced little material of significance.

Overall, our excavations at Dove Cay produced very little data. I do not know how big the site is or where the primary deposit is located. One fact seems clear: whatever cultural

material remains on Dove Cay lies under as much as half a meter of wind-blown and/or wave-deposited sand. From the surface scatter and material eroding down the slope, it seems clear that some human activity took place on the northern end of the flat interior area. Yet it is impossible to determine the scope and scale of these activities from the meager archaeological evidence.

## Results

### The ceramic assemblage

The twin pot comprises the entire ceramic assemblage of Dove Cay. We did not identify a single sherd anywhere on the surface or in any of the matrix removed from Units A-C. There is no vertical or horizontal distribution to discuss, so I will focus on the twin pot itself.

The twin pot is an entire third of a small bowl. It was given this informal moniker almost immediately because of the duo of anthropomorphic figures that adorn the handle (Figure 6-30, Figure 6-31). The vessel is thin (4 mm) and small, with an orifice of 8 cm in diameter. The surface is highly burnished, but there is some erosion of the interior bowl surface resulting from the manner in which it lay in the ground (the interior bowl was exposed to the elements: the handle and exterior lay buried beneath the surface of the slope near Units B and C). The decorative motifs present on the vessel, as well as its shape, seem to combine elements of both Meillacan and Chican subseries. The twins themselves are appliqué, which is a diagnostically Meillacan motif. Moreover, the incised lines present on the shoulder of the vessel beneath the rim were executed while the clay was still somewhat wet (Figure 6-32)—again, a Meillacan trait (Rouse, 1939, 1941). However, the pattern of the incised lines are somewhat curvilinear (Figure 6-32, Figure 6-33), and more closely resemble Chican patterns of decoration. Additionally, the neck of the vessel constricts slightly before rising to an outward-flaring rim, which is also more common in the Chican subseries than in the Meillacan. As such, the vessel is somewhat

enigmatic: it shows clear Meillacan motifs, particularly in the appliqu  technique employed to form the twins, yet also incorporates some aspects that are more commonly associated with Chican ceramics. This makes it difficult to determine its specific cultural affiliation, but if I were forced to choose, I would opt for Meillacan. The darker brown clay used to form the vessel also supports this assertion, although no detailed paste analysis has yet been attempted.

It reasons that the other half of the pot also had a handle with two other appliqu  anthropomorphic forms. If so, the vessel could represent some aspect of the duality of the indigenous worldview, or perhaps relate to a specific story in their mythology. It is almost certainly not a utilitarian vessel: such a small, highly decorated pot would not have been used for cooking, but for serving or some other, more ritualized purpose. In any event, it is beyond the scope of this dissertation to probe in detail the specific significance of the twin pot and the manner in which it may have been used at Dove Cay. I will explore this matter in a future publication, with the greenstone cemi recovered from Spud.

### **The faunal assemblage**

**Vertebrates.** A trace amount of fish bone was recovered from Unit C. This material has not been analyzed. As we discovered at Pelican Cay, this material may also be the product of bird kills, or perhaps historic-era fishing. If anyone is ever interested in analyzing this material, he or she should take that possibility into account.

**Invertebrates.** We recovered some slivers of burned and cracked conch on the surface of every Unit. Collectively, these amounted to less than 100 grams. Below the surface, we identified a single limpet, 231 grams of unmodified *Monastrea* coral in Level 2 of Unit A, and a single 4 gram periwinkle (*Littorina* sp.) in Level 2 of Unit B. Unit C was wildly productive by comparison, yielding a total of 2 small conch picks from the top of Level 1 in the upper 50 x 50

of the trench. Additionally, we recovered 33 grams of unmodified *Acropora cervicornis* coral from this Unit.

**Analysis.** Given the limited nature of the assemblage and the fact that most of it could have found its way onto the island via natural processes, there is little it can tell us. The handful of fish bones we recovered could have been deposited by pelicans, gulls, ospreys, or any of the multifarious marine fowl that have fed on and around Dove Cay for years. The limpet, periwinkle and corals are also essentially meaningless, as none were found in a clear cultural context and all could have washed into the site on the backs of high waves. The only faunal material that is indisputably cultural are the two small conch picks. These are important because they cannot be natural, and do solidify the argument that indigenous peoples were using Dove Cay in some capacity. Recall that conch picks were recovered at Pelican Cay in context with woodworking tools. It is possible that similar activities occurred at Dove Cay, but the data are hardly conclusive. Any insight into human activities at Dove Cay must await future excavations.

### **Interpretation of Dove Cay**

It is apparent that our limited work at Dove Cay missed whatever cultural material is present at the site. Because there is so little data, any claims about Dove Cay would be highly speculative. In fact, were it not for the twin pot, Dove Cay would be classified as an Activity Area akin to those on Long Cay and not as a “site” per se. It is possible that the island may have been used as a Ritual Center by the elite residents of Spud and Middleton. However, additional research at the site is needed to appreciate the role it played in indigenous settlement patterns.

### **Concluding Thoughts on the Ritual Center Concept**

It is interesting that paired sites on the north coast of Middle Caicos (MC-12 and MC-32) are located within sight of a small cay at which ritual activities took place. If tiny cays like

Pelican were viewed as an important axis mundi through which various planes of the cosmos were accessed, then maybe the habitation sites were located where they are precisely because that axis mundi was within sight. This would serve as a regular reminder to people about how the universe is organized. It would constantly and consistently reinforce the worldview, and function to maintain social order and harmony.

The implications of this line of thought extend well beyond the Caicos Bank. Are other Lucayan settlements located within sight of a small cay axis mundi? Moreover, this is Amazonian “baggage” presumably carried by everyone in the Ceramic-age Caribbean. To what extent does this situation occur in the rest of the West Indies? How many other sites throughout the Antilles are situated within sight of a small offshore island?

Rather than stomp through the bush on the big islands, maybe we should change tactics and look for ritual center sites on small cays first. If any are identified, then a survey of the neighboring shoreline could yield evidence of the larger, domestic settlements where the elites who used the island resided the rest of the time. Granted, one or two sites do not constitute a regional phenomenon. I only offer these thoughts for my colleagues consideration.

Table 6-1. The Pelican Cay Ceramic Assemblage

PLAIN SHERDS	Body Ct.	Weight	Rim Ct.	Weight	Total Ct.	Total Wt.
Small (<2cm)	130	299	4	14	134	313
Medium (2-4 cm)	79	510	7	50	86	560
Large (>4cm)	26	492	4	94	30	586
Palmetto Ware	254	1952	8	177	262	2129
<b>GRIDDLE</b>						
SHERDS	Body Ct.	Weight	Rim Ct.	Weight	Total Ct.	Total Wt.
Plain	15	243	1	68	16	311
Decorated	1	138	0	0	1	138
Palmetto Ware	13	285	1	21	14	306
<b>DECORATED</b>						
SHERDS	Body Ct.	Weight	Rim Ct.	Weight	Total Ct.	Total Wt.
Small (<2cm)	9	20	2	3	11	23
Medium (2-4 cm)	7	49	6	34	13	83
Large (>4cm)	3	53	7	168	10	221
Palmetto Ware	5	45	0	0	5	45
					582	4715

Table 6-2. Vertical Distribution of the Unit Ceramic Assemblage by Sherd Count

Unit	Imported Sherds	Palmetto Ware	Total	Percent of the Unit Assemblage
A	39	13	52	11.1
B	122	138	260	55.6
C	16	11	27	5.8
D	16	17	33	7.0
E and F	52	44	96	20.5
Total	245	223	468	100.0

Table 6-3. Vertical Distribution of the Unit Ceramic Assemblage by Weight (g)

Unit	Imported Sherds	Palmetto Ware	Total	Percent of the Unit Assemblage
A	258	99	357	10.9
B	768	1176	1944	59.3
C	117	72	189	5.8
D	55	59	114	3.5
E and F	370	304	674	20.5
Total	1568	1710	3278	100.0

Table 6-4. Surface Collections at Pelican Cay

	Imported Sherds	Palmetto Ware	Total
Sherd Count	56	58	114
Weight (g)	667	770	1467

Table 6-5. Punctuation Motifs at Pelican Cay

Sherd Description and Weight (g)	Shape	Description	Stylus
Body, 18	Round	Small and deep, single row	Solid with flat tip
Shoulder, 28	Round	Medium and hollow, single row	Hollow reed or straw
	Upward thrusting cylinder	"Tic-tac" shape pressed upward at an angle, single row	Unknown
Body, 4	Round	Small, circular, and shallow, single row	Solid with flat tip
Rim, 6	Round	Shaped like the head of a bone, with the processes visible in the impression, single row	Bone
Rim, 34	Irregular round	Round, concave "BB" shaped impressions, single row	Solid with rounded tip
Body, 4	Spheroid	Round shape pressed sideways	Solid with flat tip
Body, 5	Angular round	at an angle, 2 rows	Solid with flat tip
Shoulder, 12	Lunate	Semi-circular shape pressed upward at an angle	Solid with flat tip

Table 6-6 Pelican Cay Invertebrate Remains

Large Mollusks						MNI
	< 10 cm	10-20 cm	> 20 cm	UID	Pieces (l)	
<i>Strombus gigas</i>	32	26	17	27	1.5	102
<i>Strombus gigas</i> tools		Pick	Gouge	Celt	Hammer	
Finished tools		3	2	2	4	11
Total <i>Strombus gigas</i>						113
<i>Cittarium pica</i>	< 4 cm	4-7 cm	> 7 cm	UID	Pieces (g)	
	35	22	7	15	359	79
<i>Charonia variegata</i>						1
<i>Cymatium femorale</i>						1
UID <i>Cymatium</i> sp.						1
Other Mollusks	Beads	Regular	Tools	Mass (g)	MNI	
<i>Codakia orbicularis</i>		22	8	273	30	
<i>Codakia orbiculata</i>				9	2	
<i>Codakia costata</i>				3	1	
<i>Tellina georgiana</i>				79	10	
<i>Nerita</i> sp.				68	25	
<i>Oliva</i> sp.				22	4	
<i>Olivella</i> sp.				1	1	
<i>Pinctada radiata</i>				4	1	
<i>Astraea caelata</i>				8	1	
<i>Sinum perspectivum</i>				20	1	
<i>Fissurela</i> sp.				4	1	
<i>Trigonostoma tenerum</i>				10	1	
Sea biscuit				3	1	
Chitons				Mass (g)	MNI	
<i>Acanthopleura granulata</i>				62	15	
Corals			Tools	Mass (g)		
<i>Acropora cervicornus</i>			4	899		
<i>Acropora palmatta</i>				56		
<i>Solenastria</i> sp.				120		
<i>Diploria</i> sp.				253		
<i>Montastrea annularis</i>				303		
<i>Favia fragum</i>				16		



Figure 6-1. View of Pelican Cay from the beach at Bambarra Landing. The tombola that attaches the cay to Middle Caicos is clearly visible as the light color contrasting with the darker blues of somewhat deeper water.



Figure 6-2. The jagged northern shore of Pelican Cay.



Figure 6-3. The sea grape vegetation on the western third of Pelican Cay.

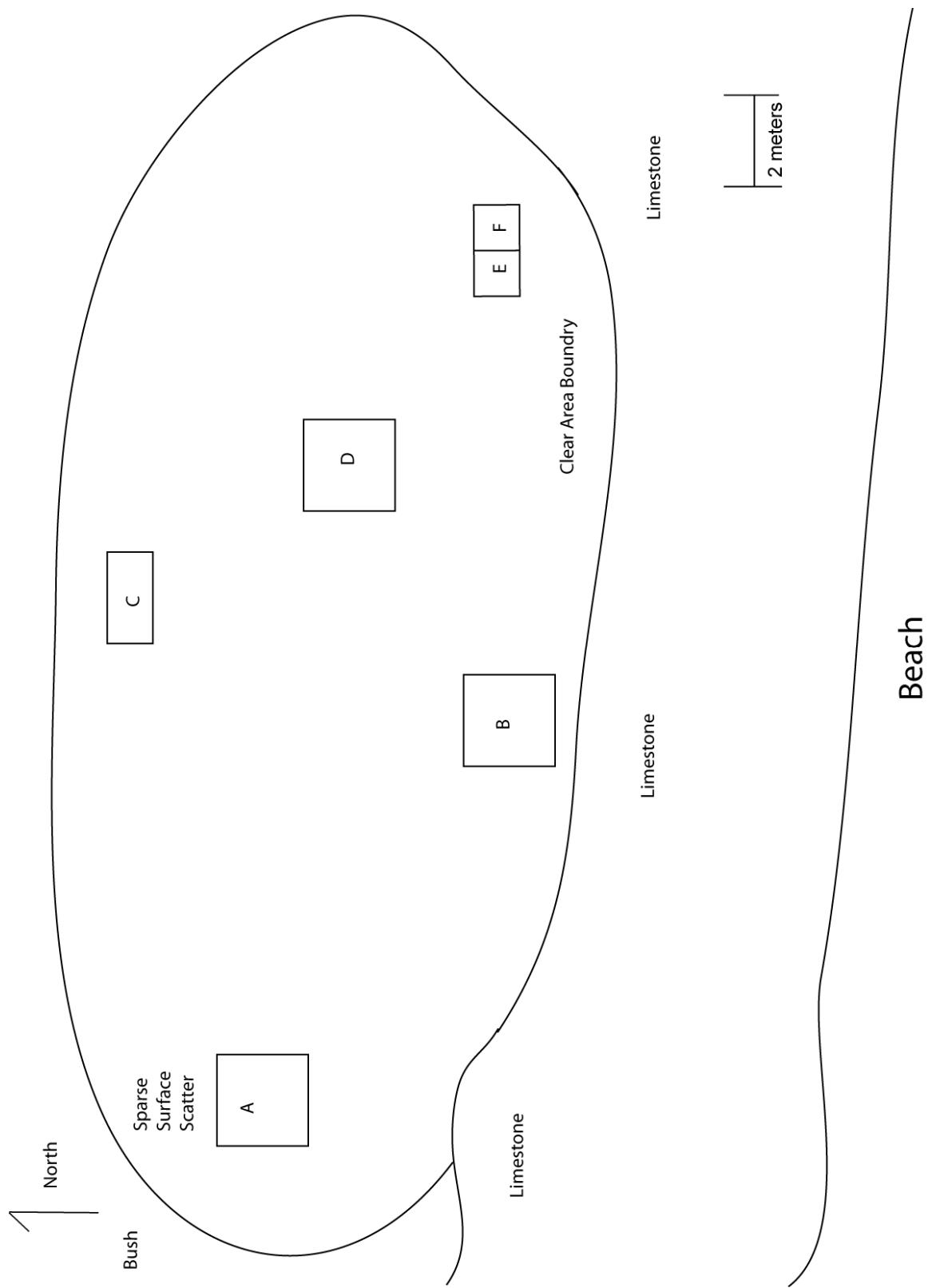


Figure 6-4. Map of the Pelican Cay site and location of our excavation Units.

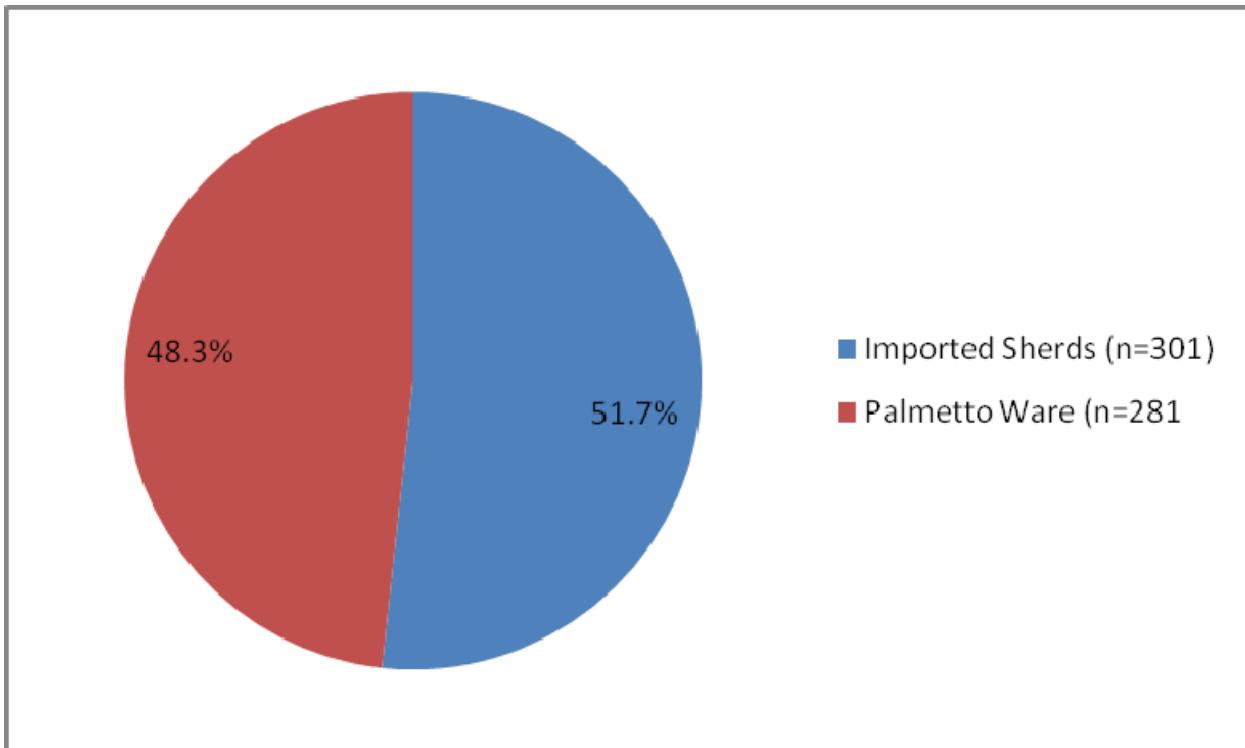


Figure 6-5. Frequency of imported and Palmetto ware sherds at Pelican Cay.

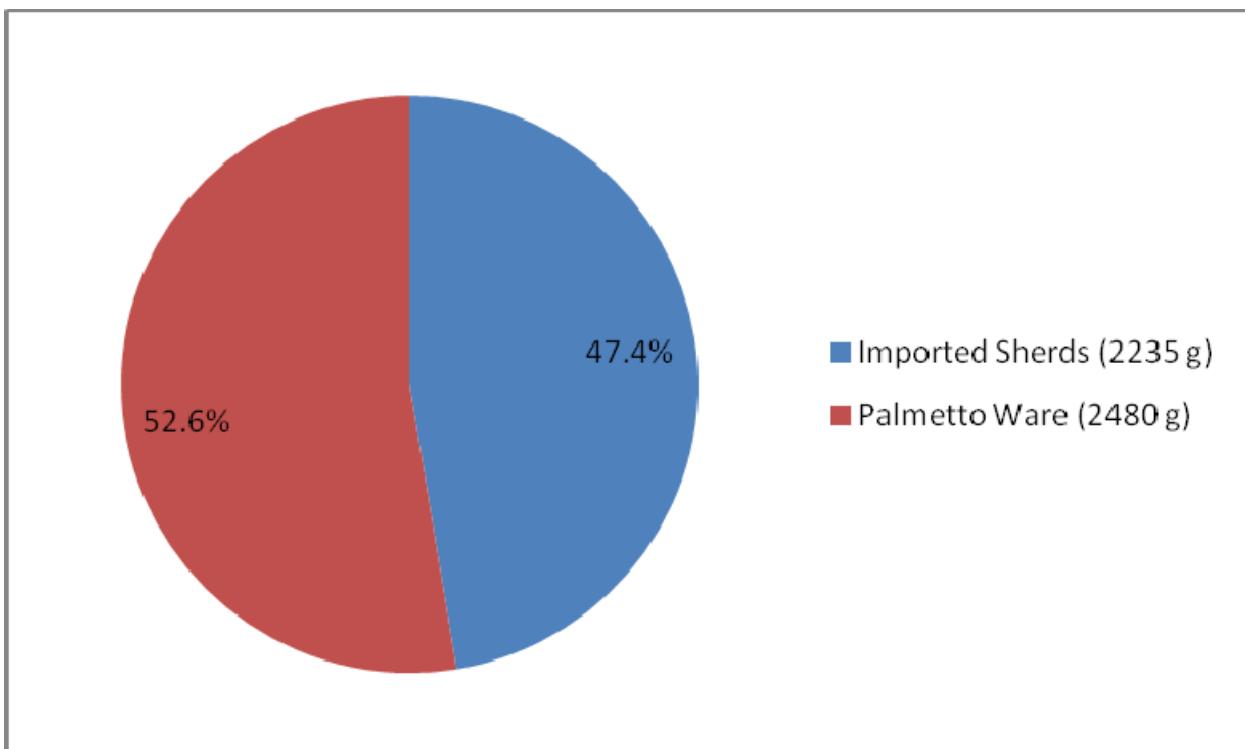


Figure 6-6. Relative weights of imported and Palmetto ware sherds at Pelican Cay.

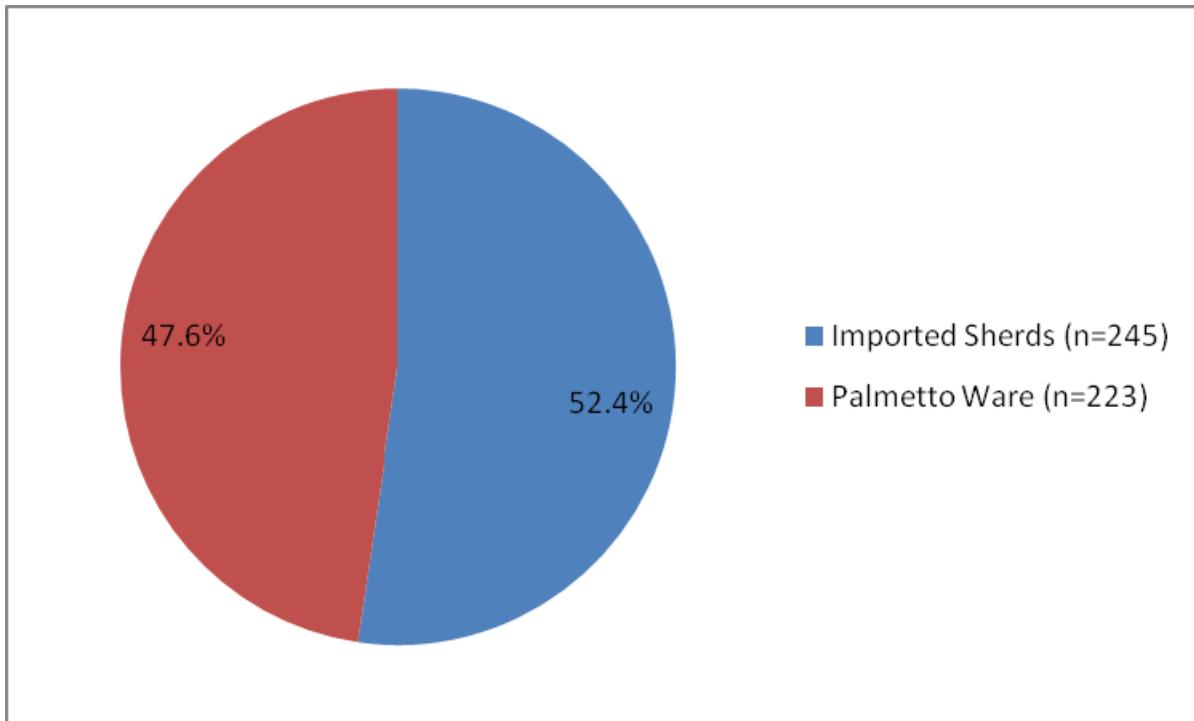


Figure 6-7. Frequency of imported and Palmetto sherds in the Unit assemblage of Pelican Cay.

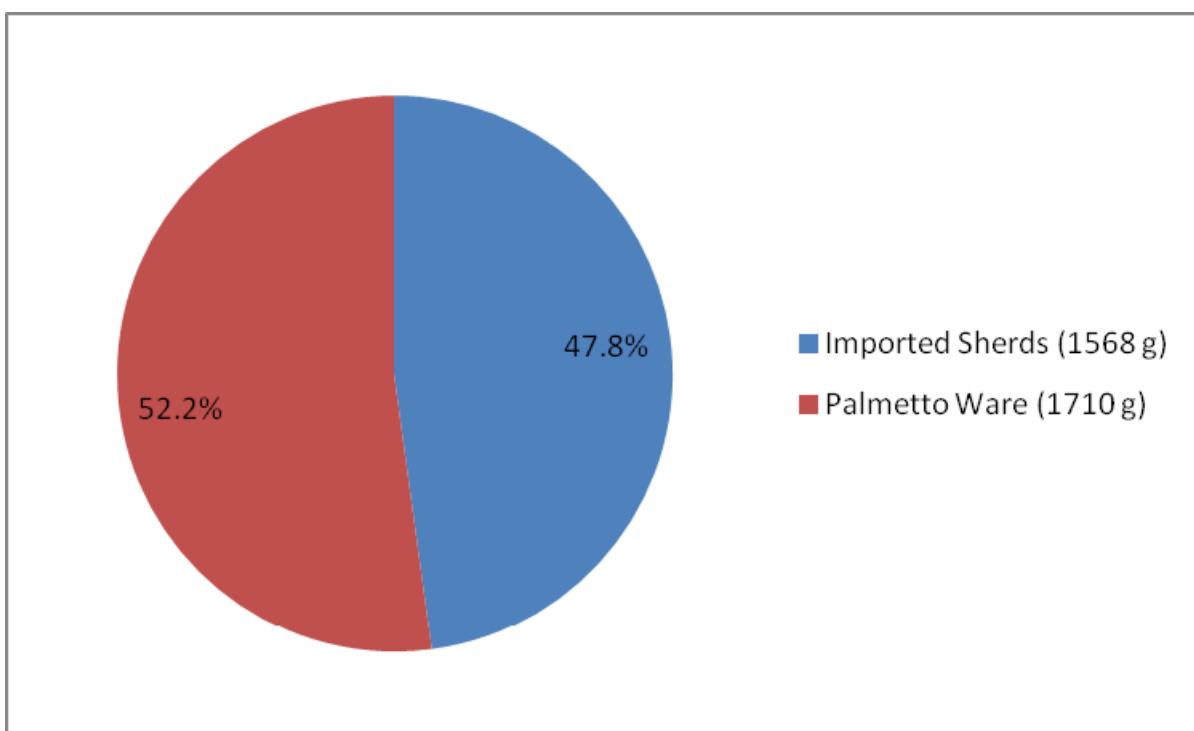


Figure 6-8. Relative weights of imported and Palmetto ware sherds in the Unit assemblage of Pelican Cay.

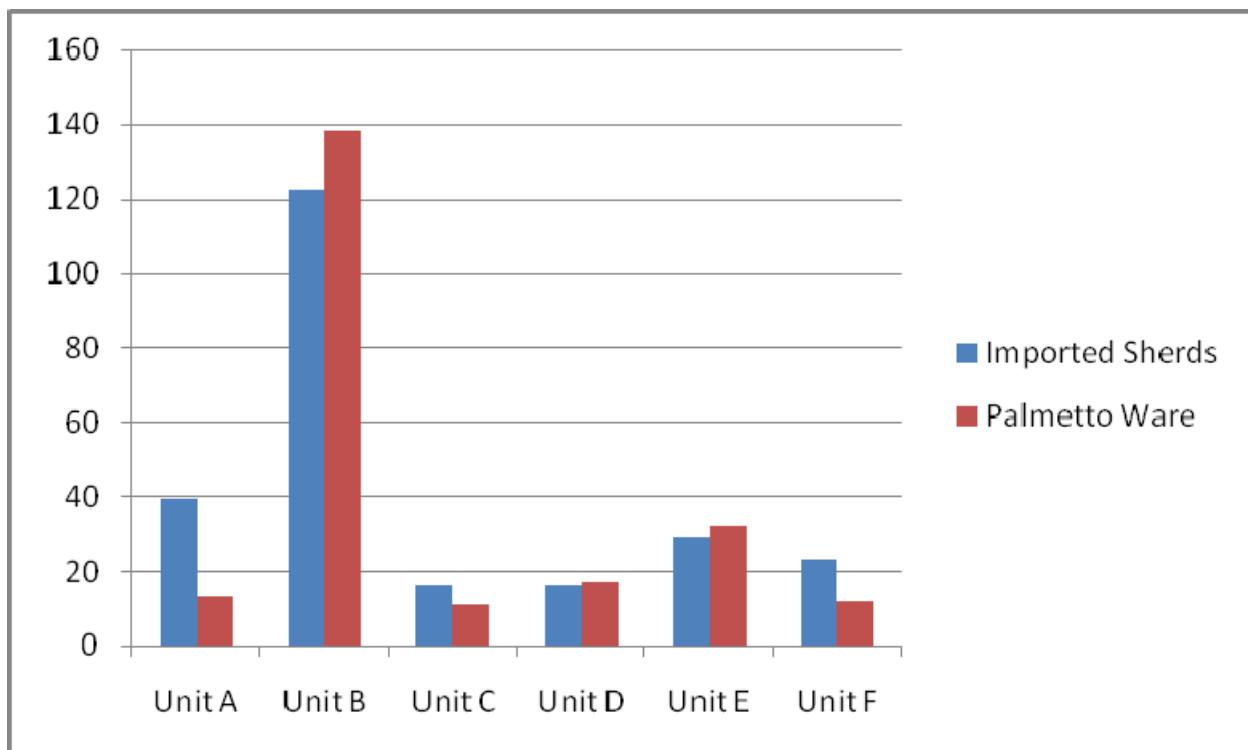


Figure 6-9. Vertical distribution of sherds from the excavated Units at Pelican Cay.

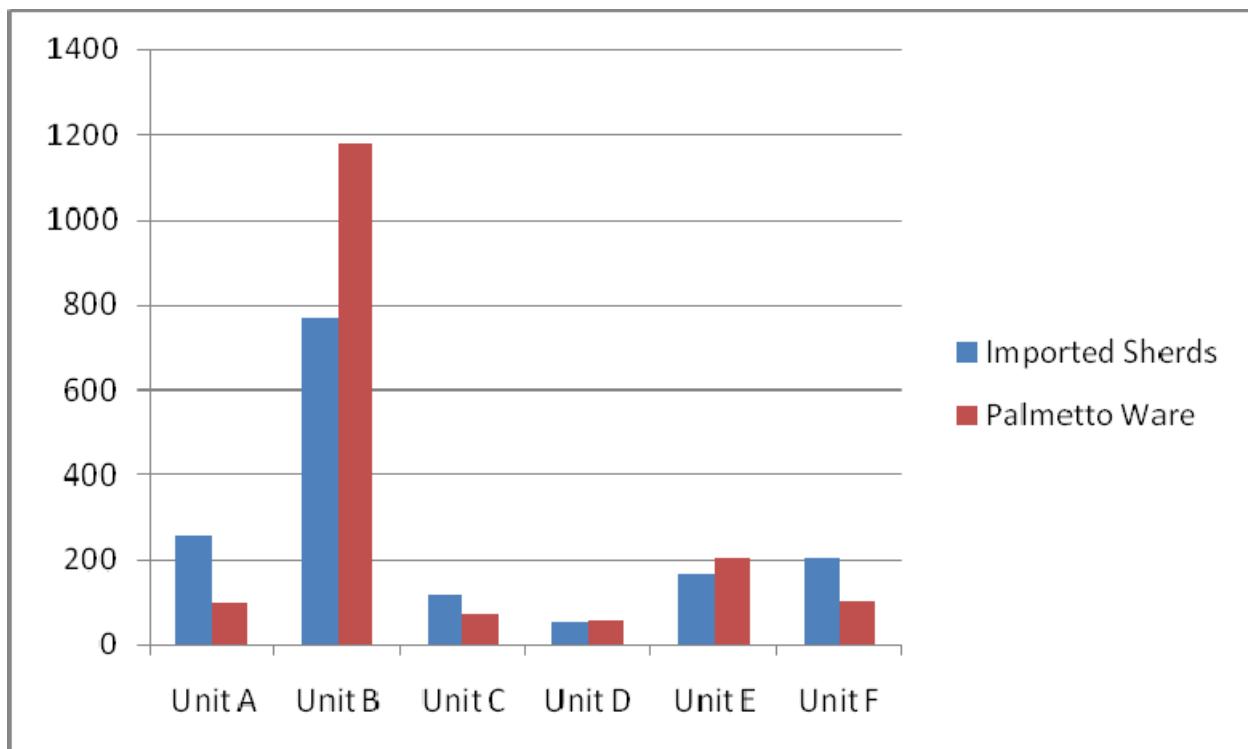


Figure 6-10. Vertical distribution of ceramic weight in grams by Unit at Pelican Cay.



Figure 6-11. Northeast facing view of the completed Unit A. Note the shallow soils and the concentration of rocks in the upper left of the frame, which is north.



Figure 6-12. Northeast facing view of the completed Unit B. Note the protruding bedrock.



Figure 6-13. Northeast facing view of Unit C. Note the abundance of broken conch.



Figure 6-14. Northeast facing view of Unit D and the obvious boundaries of the cleared circular area. The pile of rocks in the upper left of the frame was excavated from the unit.



Figure 6-15. North facing view of Units E (left) and F (right). Note the large boulder in the northwest corner of Unit E.



Figure 6-16. Some Chican sherds from Pelican Cay.



Figure 6-17. Chican effigy pot in the form of a human face from Pelican Cay.



Figure 6-18. Meillacan sherds from Pelican Cay.



Figure 6-19. Imported punctuated serving plate.

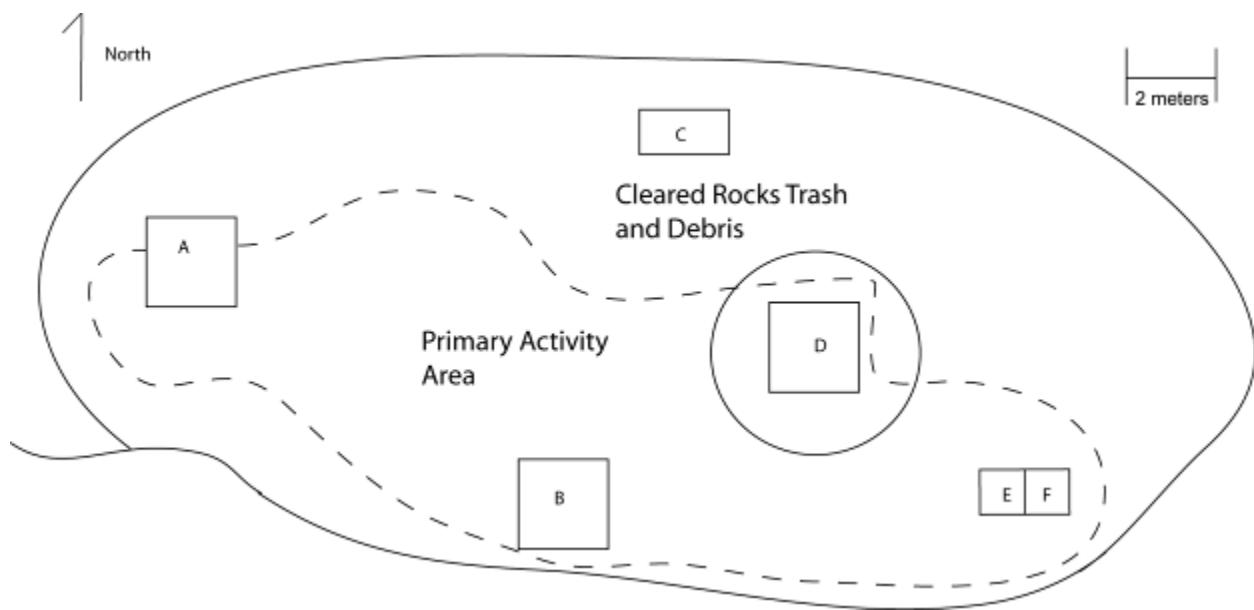


Figure 6-20. Conception of the layout of the Pelican Cay site.



Figure 6-21. View of the flat interior area of Dove Cay, as seen facing southeast from the beach. The big group of students is near Unit A, which was situated in an area with light surface scatter of burned rocks and broken shell. Unit B and the 50 x 50 Test Units are located by the blue bucket in the left-center portion of the frame.



Figure 6-22. Uphill view from the beach of the cultural deposit eroding out of the eastern side of the flat area on Dove Cay.



Figure 6-23. View of the conch pile. The flat interior is behind the bushes and to the left.



Figure 6-24. Satellite view of Dove Cay. Image created in Google Earth.

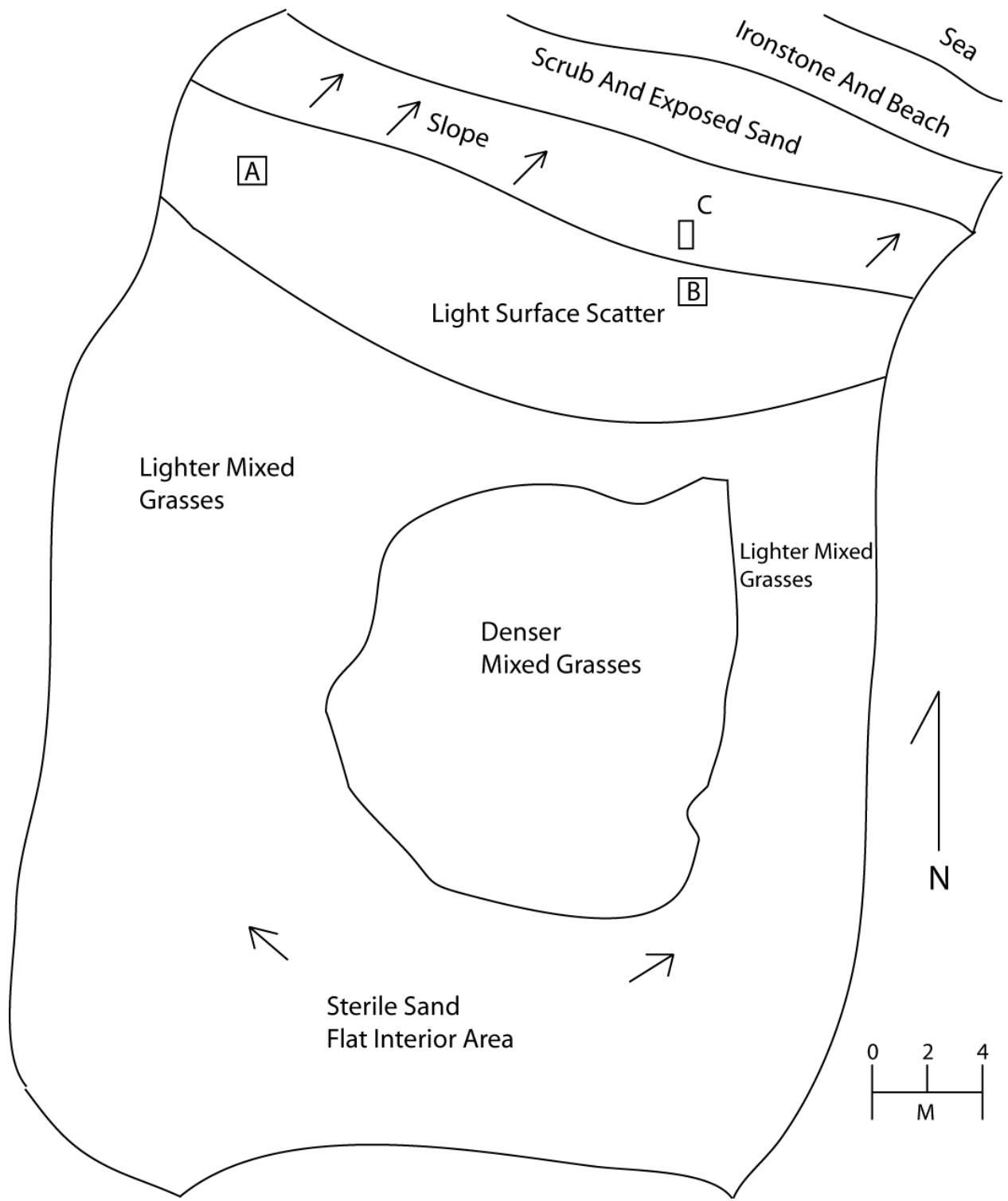


Figure 6-25. Map of the Dove Cay site that shows the locations of our excavations.



Figure 6-26. Jen Riley preparing to excavate the cave.



Figure 6-27 The interior of the cave after our subsurface tests.



Figure 6-28. Erin Funk appreciating the pile of rocks we removed.



Figure 6-29. The Unit C trench in progress. Note how the upper 50 x 50 contained dark soils throughout the first 40 to 50 cm, and the lower 50 x 50 went from darker soil to sterile sand after less than 10 cm. The students above Unit C are removing Level 1 from Unit B.



Figure 6-30. Photo of the twin pot.

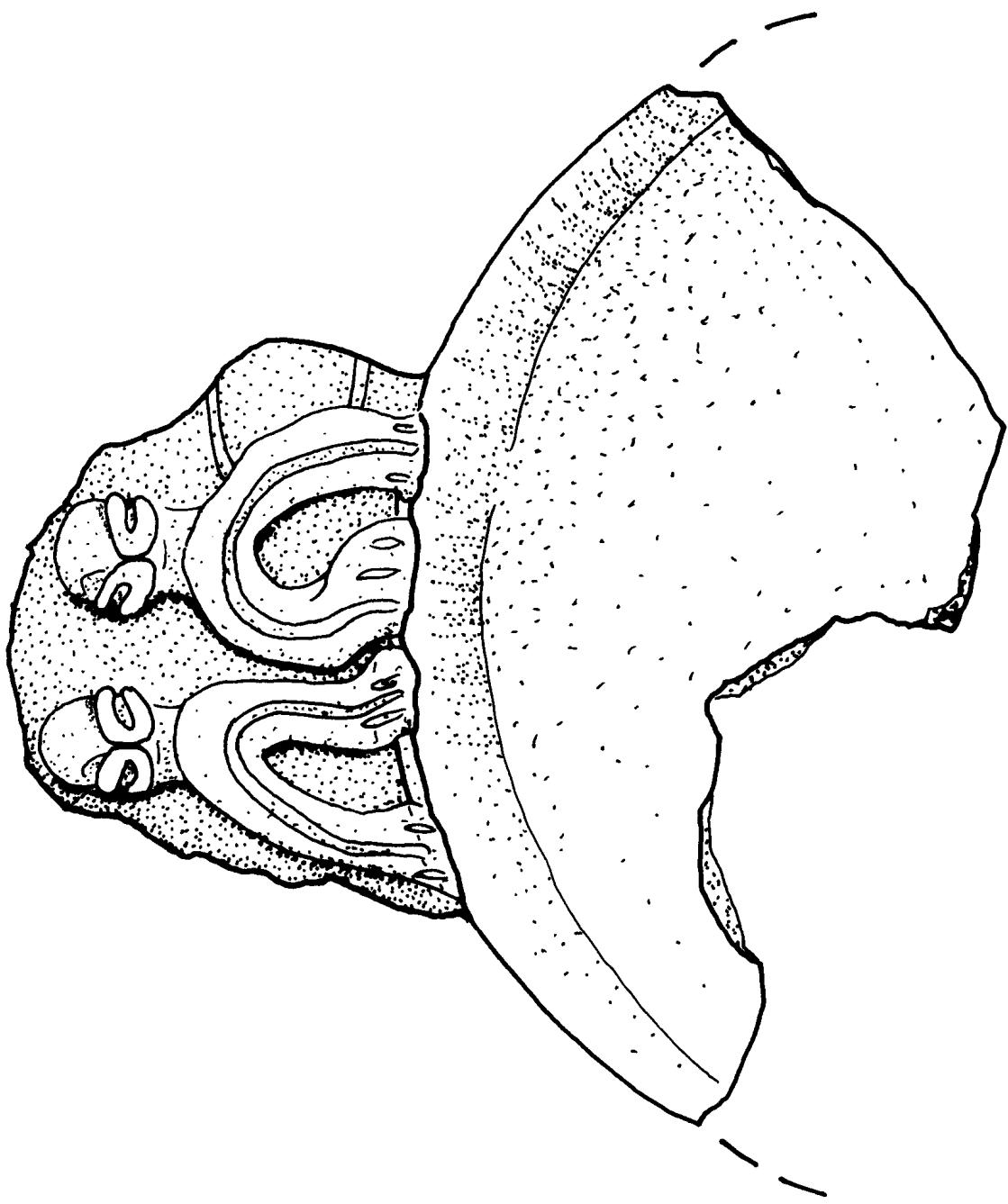


Figure 6-31. Detail drawing of the twin pot. Art by Lucas R. Martindale Johnson.



Figure 6-32. Photo of the incised lines on the right shoulder of the twin pot.

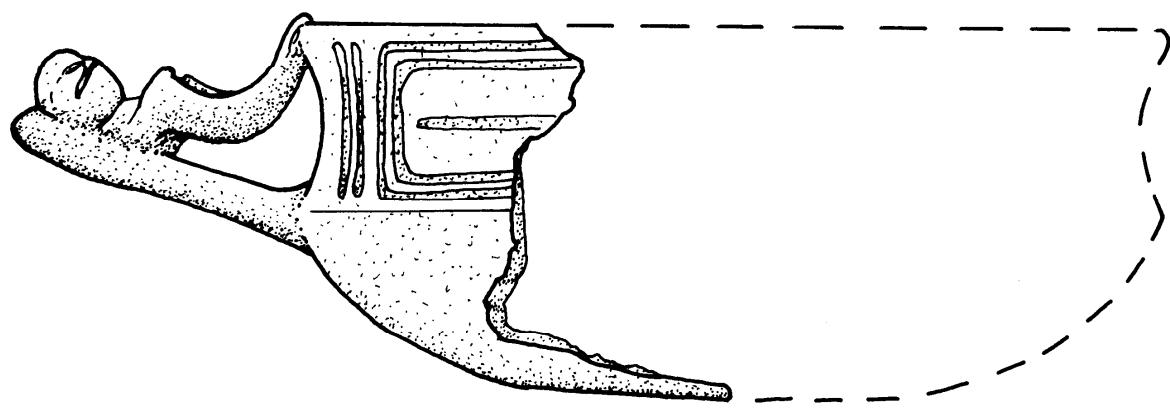


Figure 6-33. Detail drawing of the left side of the twin pot, with view of incised lines. Art by Lucas R. Martindale Johnson.

## CHAPTER 7 CONCLUSIONS

This chapter pulls together the results of my research to present an overview of the role of small cays in indigenous settlement patterns in the Turks & Caicos Islands. I begin with a brief summary of the sites and islands included in the study. To be kind to the reader, I will not repeat any of the specific details and interpretations of the research, for these have already been described. Next I discuss in broad terms the underlying logic behind indigenous peoples' use of small cay environments, and comment on the regional implications of this phenomenon. Finally, I conclude with a few ideas for fruitful research that could build upon the results of this study.

### **Small Cay Sites in the Turks & Caicos Islands**

My research discovered that there are three classes of small cay sites in the Turks & Caicos: outposts, economic hubs, and ritual centers. Each class of site has its own unique profile. Outposts are small-scale, temporary or seasonally occupied settlements that were frequently oriented around the exploitation of some locally-available resource. Economic hubs are larger, more permanent settlements with demographically diverse populations and material evidence of a full range of domestic and social activities. Ritual centers are small sites situated on very tiny islands that show evidence of specific elite-oriented activities. In sum, all small cay sites were not created equal: different islands facilitated different aspects of the indigenous economy and worldview.

The Gibbs Cay site and the CC-2 site we excavated on the Turks Bank are outposts. Gibbs Cay was a Meillacan settlement occupied during the 13<sup>th</sup> century. The residents probably visited periodically to manufacture beads and procure fish for export to Hispaniola. CC-2 on Cotton Cay was initially established by Palmetto people, possibly from the central Bahamas. Later, it was occupied by groups from the Caicos settlements, who were producing beads for

export shortly after Spanish contact. There are three other small cay sites in the Turks Islands—another on Cotton Cay and two on Salt Cay. These are also likely outposts, as are the four known sites on Grand Turk.

The Middleton and Spud sites on the Caicos Bank are economic hubs. Both were established nearly simultaneously around the mid 12<sup>th</sup> century by Meillacan affiliated peoples from Hispaniola. Middleton is the larger and more complex site. It includes a plaza and was home to the first chief in the Turks & Caicos. This chief oversaw the ongoing trade relationship with Hispaniola, in which cured conch and fish, shell beads, shell tools, and perhaps wooden implements were exported. Spud was Middleton's sister settlement, and likely was established to expand access to a greater diversity of marine resources, both for local consumption and perhaps export. Both of these sites continued to be occupied late in prehistory, up to and perhaps beyond Spanish contact. At that time they were affiliated with Middle Caicos settlements in the diversified export enterprise with Hispaniola.

The Pelican Cay site is a ritual center. Pelican Cay has an extraordinary assemblage of ceramics and material culture that indicates it was used for elite feasting, rituals, and other socially-significant activities. Here, elites from the north coast of Middle Caicos congregated to negotiate social relations with elites from other large settlements in the region. The Dove Cay site may have filled a similar role for elites living on small cays near South Caicos, but at this time, the material evidence is too scant to support such a claim.

Aside from these sites, we encountered evidence of indigenous activity on four other small cays in the Turks & Caicos. On the Caicos Bank, Horse Cay has a Meillacan site, and Plandon Cay has a sizeable indigenous footprint. Although circumstances were such that we could not excavate these sites, they were probably affiliated with Middleton and Spud. On the

Turks Bank, Long Cay and Pinzon Cay also produced evidence of a limited indigenous presence, but it is not possible to determine who used these islands or when. None of the seven other small cays we surveyed in the Turks & Caicos had unambiguous evidence of indigenous occupation. Still, 11 of the 18 small cays we visited were used to varying degrees in prehistory.

This study also demonstrates that small cays were used by different people across time. The results make it possible to construct a general culture history of how small cay environments were employed over the centuries. The first widespread use of small cay environments occurred during the Meillacan phase (AD 1150 to circa AD 1300). Beginning in the 12<sup>th</sup> century, Meillacan affiliated peoples from Hispaniola traveled to the Turks & Caicos to collect local resources for transport back to their homeland. They began by establishing temporary outposts across both the Turks Islands and the Caicos Islands. They collected foodstuffs like fish and conch to help feed the general Hispaniolan populace, and manufactured shell beads for export to the elites. Over time, demand for imported produce grew. At some point, probably in the late 12<sup>th</sup> or early 13<sup>th</sup> century, the Meillacan peoples established permanent settlements in the Caicos Islands to intensify this trade. More sites were established across the Caicos soon thereafter as communities grew and a “population explosion” occurred.

In the 14<sup>th</sup> century, the Meillacan phase transitioned into the Lucayan phase (circa AD 1300 to circa AD 1520). This transition is primarily ceramic: as Meillacan ceramics became increasingly less common in Hispaniola, indigenous peoples in the Turks & Caicos began to use the Chican ceramics that replaced them and produce a greater proportion of their own Palmetto ware ceramics. As this transpired, some small cay sites were abandoned while others continued to grow. New sites were established on the larger islands as well. Across the area, the population remained actively engaged in trade with Hispaniolan chiefdoms. By the 15<sup>th</sup> century,

salt from Middle Caicos was being exported in addition to foodstuffs, and to a lesser extent, shell beads. At the time of European contact, small cay sites in the Caicos Bank were working in concert with settlements on the larger islands to manage the export trade with Hispaniola.

It is significant that these cultures all employed small cay environments extensively for hundreds of years. This suggests that there is some underlying reason for this behavior that transcends time and cultural identity. This argument is further supported by limited evidence that migrants from the central Bahamas also settled in the Turks & Caicos, and chose a small cay in the Turks Islands. Moreover, there are other small cays not included in this study that have known indigenous settlements: both Little Ambergris and Big Ambergris Cays on the Caicos Bank have several sites apiece. Let us now examine the underlying reasons so many different people used small cays in prehistory.

### **The Role Of Small Cays in Indigenous Settlement Patterns**

It is clear that small cays were a big factor in indigenous settlement patterns. In fact, small cay sites outnumber sites on larger islands in several regions of the Turks & Caicos. Five of the nine sites in the Turks Islands are on small cays. In the eastern Caicos Islands, the figure is even more extreme. South Caicos has only 3 small sites or activity areas—it appears that indigenous peoples simply did not intensively occupy this island. In contrast, there are 5 sites and 4 activity areas on the small cays adjacent to South Caicos, including the large economic hubs Middleton and Spud. Why? I argue that people were attracted to small cays because the unique nature of these environments helped them meet their economic and social needs in ways that larger islands could not.

## **Economic Reasons to Settle Small Cays**

Indigenous peoples of the Turks & Caicos ate and exported fish and mollusks. Fish and mollusks live in the sea. A coastal settlement on a larger island like Grand Turk or Middle Caicos has about a 180 degree frontage to this resource. A site on a small cay has much more: at Middleton, it is 360 degrees. Therefore, the simple act of situating a settlement on a small cay can effectively *double* the size of your primary catchment zone. This not only enhances one's own food security, but also makes it far easier to generate a surplus for export to affiliated settlements in Hispaniola, which was an overarching theme of indigenous settlement in the Turks & Caicos throughout prehistory. Granted, small cays lack the diversity and density of terrestrial food species. But faunal studies from the Turks & Caicos have shown time and again that terrestrial resources account for a fleeting percentage of total protein intake. There is also no evidence that terrestrial species accounted for a significant proportion of exports of foodstuffs. Indigenous peoples and their export-based economy could survive without a lot of iguana. Neither could survive without fish and mollusks. The sea also provided other economic benefits beyond food. It produced the mollusk shells that were manufactured into beads and tools, and facilitated the movement of people and goods throughout the region. Small cay settlements, by virtue of their location in the middle of this vast resource, enabled the populace to easily acquire and transport the goods upon which their economy was founded.

Different types of sites were located on small cays for different economic reasons. Outposts are situated in small cay environments that facilitate specific activities, like exploiting a concentrated or locally-available food resource, and beadmaking. Economic hubs are positioned in environments that facilitate not only resource procurement, but also efficient distribution to consumers in both the Turks & Caicos and Hispaniola. Even ritual centers play an important

economic role. The activities at ritual centers are designed to maintain harmonious social relations between settlements and facilitate cooperative labor arrangements necessary to effect the export trade.

Even though small cay settlements had clear advantages, these came at a price. While access to various types of marine protein and raw materials for craft production is clearly a critical piece of the prehistoric Turks & Caicos adaptation, these are not the only resources necessary for survival. Therefore, settlements on resource-deficient small cays incurred certain costs that sites on larger islands did not. First, small cays are extremely arid, and could not provide water security. Fresh water would need to be located elsewhere and transported to the cay. Second, manioc- and cotton-producing horticulturalists need substantial tracts of land to grow their crops. They need plots many times larger than are used for a season's planting: individual gardens require a decade or longer fallow period before they can produce again. Small cays might accommodate kitchen gardens for peppers, gourds, and such, but the manioc and cotton fields would have to be located elsewhere. Third, small cays do not have trees or any substantial vegetation. This is a byproduct of their aridity—the plants that grow in this environment tend to be small and stunted shrubs, grasses, and succulents. Timber and thatch for structures, lumber for wooden implements, and firewood for daily domestic use had to be obtained elsewhere. Finally, some small cays are more vulnerable to tropical cyclones. Middleton, Horse, Plandon, and Long (Turks Bank) Cays are low in many places, and show some evidence of tidal overwash. Residents would have to seek shelter elsewhere as a storm approached.

In economic terms these facts should not be viewed as obstacles to settlement, but simply as costs of doing business. And in reality, the costs were not that high. We cannot forget that

indigenous West Indians did not view the sea as a noisome barrier, but as a useful conduit. Canoe travel makes it possible to reach anything within a 16 km radius of a small cay settlement in 2 hours or less. As long as necessary resources like water, arable land, timber, and high ground were located on other islands within a reasonable commute, people on small cays would not have viewed these as inconvenient or inaccessible. Moreover, it would not be necessary to make these trips every day. Several days' water could be transported in gourds, tubers have a reasonable shelf life, a canoe full of firewood should fuel many cooking fires, and cyclones are seasonal and provide hours of forewarning of their approach. Whatever inconveniences arose from living on a small cay could be easily mitigated as long as that cay was located near enough to the resources used in either the daily routine or the occasional emergency. The incremental costs could not have outweighed the benefits of doubling one's primary resource catchment.

In conclusion, small cays were part of the indigenous settlement pattern *because it made the most economic sense*. They were necessary components of the region's export-based economy throughout prehistory. Small cay sites, by virtue of their location near valuable commodities, facilitated the Turks & Caicos' trade relationship with Hispaniola. This trade relationship was present from the very beginning, when Meillacan peoples journeyed to the region to extract the local resources in the 12<sup>th</sup> century. They settled small cays to maximize access to the resources they were there to collect. Over time, the enterprise ultimately grew into MC-6 and its allies—a diversified, export-focused conglomerate, engaged in the salt, fish, conch, and tool industries, with a footprint throughout the Turks & Caicos Islands. Small cay sites were a critical means of production for this enterprise. These sites did incur additional costs, but these were manageable and did not outweigh the benefits of maximizing access to the resource base. The indigenous peoples of the Turks & Caicos recognized this basic market principle. That is

why they so heavily incorporated tiny, arid, windswept, resource-deficient cays that seem so useless to us today into their settlement pattern.

### **Social Reasons to Settle Small Cays**

The people who lived on small cays must have had their own vision of why they were there. Certainly they were cognizant of the underpinning economics, but they would not have described their experiences with terms like “access to catchment zone.” In their worldview, small cays were not factories, but a familiar place where familiar people did familiar things. Their reasons for using a small cay were necessarily more personal and intimate, and it is useful to explore how they may have interpreted these.

Very likely, indigenous peoples held different concepts of different small cays and different types of small cay sites. For example, it is difficult to imagine that they felt the same way about Pelican Cay as they did about Cotton Cay. Considering the differences between outposts, ritual centers, and economic hubs provides fruitful insight into these contrasting views.

It is relatively simple to conceive of how indigenous peoples viewed outposts on small cays. These were small scale, temporary settlements at which small groups of people (probably men) engaged in specific economic activities. The lack of much social pretense at these sites suggests that indigenous peoples viewed them and the associated small cay environment as a means to an end—a place where there was work to be done without much pomp and circumstance. Small cays with outposts probably were not viewed with much more regard than any other part of the landscape.

Ritual centers lie at the opposite extreme. Pelican Cay may have been viewed as the axis mundi between the three planes of the indigenous cosmos. These islands literally link sea, earth, and sky. Because they are so much smaller than other islands, these cays look like the earthly

plane wedged between the other realms of the cosmos from a distance. When viewed from a perspective on the island itself, earth, sea, and sky seem to become one element—the earth upon which one stands is incorporated into the surrounding sea, and the open vistas in all directions create an impression that everything is immersed in the dome of the sky. One can imagine that this impression was why ritual centers could have been viewed as portals through which one could access the supernatural worlds above and below—here the sea and sky combine to envelop you and your earthly footing, all at once. Ritual centers are also associated with sacred space by virtue of their distance from the profane domestic activities of daily village life. As such, they were ideally suited for the special people and the special activities that took place there.

The spiritual significance of economic hubs on small cays is more difficult to interpret, for there are many more variables. Even so, Spud is easier to conceptualize than Middleton Cay, for Spud lies on a pretty big island that lacks the clear visual link to the cosmos that is suggested by tiny cays like Pelican. Consequently, Long Cay was probably not viewed as a particularly sacred place, but rather as a suitable locale that helps local peoples maximize the economic potential of the region. It is more difficult to surmise how Middleton fit into their worldview. Middleton Cay is small and low, and the profile it cuts on the horizon creates a similar impression of the axis mundi one experiences while gazing at Pelican Cay from Bambarra Landing. Yet at Middleton, profane domestic activities are an integral part of the settlement, and their presence must have in some way seemed polluting to this otherwise sacred space. How was this contradiction reconciled? I believe that the plaza at Middleton provided a means to resolve this apparent conflict. The plaza created a concentric system of sacred space which centered around the Middleton chief. The plaza was built to project social power and sanctify the chief and his household residence. Middleton Cay was already an attractive place to settle from an

economic perspective, but the island's appearance as an axis mundi of the cosmos may have also factored into the chiefly decision to establish a large settlement there.

## **Conclusion**

The decision to incorporate small cays into the regional settlement pattern in the Turks & Caicos Islands was based upon overarching economic needs and aspects of the culturally-specific worldview of indigenous peoples. This was not an isolated phenomenon: the small cay settlements examined in this study are affiliated with numerous cultures and date from between the mid 12<sup>th</sup> century to after Spanish contact. Small cay environments *mattered* to the indigenous peoples in the region. They should matter to the archaeologists who study them, too.

## **Avenues for Future Research**

My research revealed a great deal about the manner in which small cays fit into regional settlement patterns. In the process, it raised some new questions and even produced some surprises. Below I briefly outline some research questions that could build upon my research and lead to a better understanding of indigenous activities in the Bahama archipelago and beyond.

## **The Role of Small Cays Elsewhere in the West Indies**

The factors that caused the first residents of the Turks & Caicos to exploit small cay environments are not found only in the southern Bahama archipelago. Many people throughout the West Indies faced similar economic situations and lived by a similar creed. Therefore, it is reasonable to expect that the settlement pattern I observed in the Turks & Caicos occurred elsewhere in the region. In general, small cays have not received much attention from archaeologists. I am not entirely sure why, but I assume that logistical difficulties have a lot to do with it. After all, you need to hire a boat to get to there, and that can be expensive and difficult in more remote locations. I also believe that the discipline suffers from a bit of "group

think” based on notions that small, remote cays are too resource deficient to have ever been intensively settled by humans. Clearly that was not the case, and small cay environments elsewhere in the Antilles should not be ignored. My experience even tells us where to look: small inshore islands like Pelican Cay and Dove Cay near coastal habitation sites, and more remote cays that lie within a 16 km radius of larger, more resource-laden islands. We must actively explore these environments to build a more complete picture of indigenous West Indian settlement patterns. If I have encouraged any of my colleagues to visit small islands in the course of their research, then I will consider this project a complete success.

### **Additional Field Research in the Turks & Caicos Islands**

It is a common lament that one never has enough time in the field to accomplish everything one sets out to do. If I had the chance to lead another project just like this one, then I would focus on the following sites to explore leads generated by this project. I would excavate Dove Cay to evaluate if it was a ritual center akin to Pelican Cay, or an outpost like Gibbs Cay. I would visit Horse Cay to solidify the Meillacan affiliation I suspect and determine how the site related to Middleton and Spud. The deposits at Spud are better preserved than any of the other sites we examined, and I would return for additional insights that better explain how the site evolved over time. I would like to know the relationship between GT-4 and other Meillacan sites in the Turks Islands. Finally, I would spend as much time as I could visiting small cays across the Caicos Bank, especially around Providenciales and North Caicos, where there are many potential targets.

### **The Vertebrate Faunal Material from the 2004 Excavations**

There is much to be learned from the bones we recovered in 2004. None of the vertebrate faunal material was analyzed, and there are bags and bags of it curated at the Florida Museum of

Natural History. I truly hope that a brilliant young anthropology student looking for a “shovel-ready” MA thesis topic is steered toward that collection. There is a great deal an analysis could tell us about the subsistence patterns at various small island sites. It would also add welcome context to the ideas I have outlined, and could help test many of my hypotheses.

### **Were There 17<sup>th</sup> Century Lucayans?**

The biggest surprise of this project was some tantalizing evidence that indigenous peoples survived in the Turks & Caicos long after Spanish contact. The traditional thinking is that the Lucayans had vanished by the second decade of the 16<sup>th</sup> century. This timeframe comes exclusively from Spanish accounts, and is not directly supported by other lines of evidence.

A growing body of archaeological data contradicts the conventional wisdom. There are three sites in the Turks & Caicos that must have been occupied after Spanish contact because they contain European items. This implies that at least three settlements were active long enough after contact to acquire Spanish goods (MC-6 and CC-2) and Spanish rodents (MC-32).

Radiocarbon data from 2 bird bones excavated from deposits at MC-6 produced dates of Cal AD 1550 and Cal AD 1630 (Jones O’Day 2001:4). This data clearly suggests that at least MC-6 was occupied at least in the 16<sup>th</sup>, and perhaps into the 17<sup>th</sup> centuries. Further evidence is provided by my radiocarbon sample from a 30 cm subsurface context at Gibbs Cay, which produced a date of Cal AD 1620 (albeit with a two-sigma range that begins at AD 1490). Elsewhere, settlements on Eleuthera in the central Bahamas, have produced dates in the 16<sup>th</sup> and 17<sup>th</sup> centuries (Michael Pateman, personal communication 2009).

The radiocarbon data alone seem sufficient to call the early 16<sup>th</sup> century timeframe for Lucayan extinction into question, but there are other circumstantial reasons to doubt the Spaniard’s conclusions. First, no one knows which of the Turks & Caicos or Bahama islands

Ponce de Leon or other Spaniards visited (Sauer 1966:190). Lucayan population densities were not huge, and they may have bypassed the settled islands entirely. Second, if the Spanish had approached Middle Caicos where two of the verifiable post-contact sites were located, they could not have gotten very close. The settlements were inaccessible to Spanish caravels. The Caicos Bank waters adjacent to MC-6 are quite shallow for many kilometers south of the island, and the north coast near MC-32 is protected by the impenetrable fringing reef (Don Keith, personal communication 2009). Third, even if the Spanish set foot on Middle Caicos (for which there is no evidence), the Lucayans could have simply fled into the dense bush—with which they were intimately familiar—and hid until the Spaniards gave up and left.

If “the Lucayans survived into the 17<sup>th</sup> century” is a working hypothesis, then how should we evaluate it? I have a few ideas for productive research into this question. This list is certainly not exhaustive, and I primarily offer it as food for thought.

First, we should re-evaluate our radiocarbon data from Lucayan sites. Perhaps more 16<sup>th</sup> and 17<sup>th</sup> century dates have been obtained from the Bahama archipelago, but researchers were loath to report them because they are not in line with the “conventional wisdom.” I have to admit I initially felt this way about the Gibbs Cay date, which is why I submitted another sample for analysis! Caribbean researchers should re-examine our radiocarbon results and not be afraid to include valid radiocarbon evidence simply because it contradicts the Spanish chronicles.

Second, we should reconsider our notions about what a post-contact site looks like. Spanish artifacts certainly indicate that a site was occupied historically, but we should not expect to find these at every post-contact Lucayan site. Consider En Bas Saline, the “ground zero” of initial Spanish-Taino relations. Here, there are few Spanish items in evidence in the post-contact indigenous middens, because many Taino domestic activities continued uninterrupted well into

the 16<sup>th</sup> century (Deagan 2004). Because they were more peripheral to the Spanish Main, the Spanish never had much of a presence in the central and northern Bahama islands. Moreover, these islands did not maintain a trade relationship with Hispaniolan settlements that might have provided Spanish trinkets in exchange. Because they were “out of the loop” it is probable that Spanish activities had less impact on these Lucayans, and that they continued to practice business as usual. Consequently, we should not assume that sites with a purely Lucayan assemblage were, by definition, occupied prior to 1492. We are far more likely to identify 16<sup>th</sup> and 17<sup>th</sup> century Lucayan sites if we shelve the idea that these *must* have some European component in the assemblage.

Third, we should consider how news of Spanish actions would have affected the Lucayans. By virtue of their longstanding trade relationship with settlements in Hispaniola, the Turks & Caicos communities had to be aware of what was going on there in the decades after contact. Reports of military massacres, forced servitude, and mass die-offs must have caused them to adjust their behavior out of self interest. The data from CC-2 suggests as much, and we should look for additional evidence at other contact-era sites in the region.

Finally, we should evaluate how Spanish/Lucayan relations were negotiated when there was direct contact. By virtue of their propinquity to and trade relationship with Hispaniola, the Lucayans in the Turks & Caicos were likely visited by the Spanish soon after they began searching the “other islands” for labor in 1509. Shallow waters, reefs, and other local conditions would have made it difficult for the Spanish to simply round up and deport everyone in the Turks & Caicos as slaves. The Spanish must have recognized this, and perhaps sought some other arrangement that was to their advantage. The Turks & Caicos had been exporting valuable commodities to Hispaniola for centuries. These commodities would have been desired by the

Spanish. Caicos fish and conch would help feed the indigenous laborers that were working for the Spanish and no longer producing food for themselves. Furthermore, salt and cotton were valuable items both in New Spain and in Europe. If the Spanish recognized that the Turks & Caicos population was worth more to them as provisioners than as slaves, perhaps they struck a deal in which the Lucayans continued to provide commodities in exchange for protection or immunity. Such an arrangement must have been agreeable to the Lucayans, who had to know what the alternative was. Perhaps the deal also included intelligence on other Lucayan settlements elsewhere in the region where the Spanish could search for labor to deport. It was certainly not unheard of that one indigenous polity allied itself with the Spanish to gain an advantage over a local rival—Guacanagari did it with Columbus at the onset! It is a stretch, but maybe the Turks & Caicos Lucayans even became partners in the slave trade. They would know far better than the Spanish where other communities were located, and it would be easier for them in canoes to capture rivals in raids than the Spanish with their heavy ships and imperfect understanding of local waters. There is historical precedent for such deals with the devil. This scenario played out in the African slave trade centuries later, where coastal chiefs allied with European powers captured inland rivals and sold them across the Atlantic.

At this point, these are just ideas. However, it does seem time to put the early 16<sup>th</sup> century timeframe for Lucayan extinction to rest and start to explore the notion that the indigenous peoples might have survived well into the next century. I intend to make this one of my central research foci going forward.

### **Conclusion**

The main objective of my research was to explore how indigenous peoples of the Turks & Caicos incorporated small cay environments into their settlement strategy. In the process, I

wanted to enhance our broader understanding of Turks & Caicos prehistory by surveying areas for new sites and examining sites that had previously been reported but never excavated. This would facilitate a secondary goal: to unite a lot of disparate sources, thoughts, and musings about Turks & Caicos prehistory into a single document. I hope I have succeeded, and that my colleagues find this research useful.

**APPENDIX A**  
**FREEDOM OF INFORMATION ACT RESPONSE #1**

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**DEPARTMENT OF THE NAVY**  
NAVAL FACILITIES ENGINEERING COMMAND  
ATLANTIC  
6506 HAMPTON BLVD  
NORFOLK VA 23508-1278

TELEPHONE NO:

757-322-4926  
IN REPLY REFER TO:

4500 Grand Turks/Caicos  
OPBR-SF  
21 Sep 2004

Mr. Pete T. Sinelli  
University of Florida  
Department of Anthropology  
1307 Monte Lake Drive  
Valrico, FL 33594

Dear Mr. Sinelli,

This is in response to your Freedom of Information Act request received in this office on September 15, 2004. There is only one file that is responsive to your request for information on East Cay, Grand Turk Island, British West Indies.

The Navy used Grand Turk and the Caicos Islands for telecommunications operations from approximately February 10, 1961 through March 31, 1980, when the U.S. Naval Facility Grand Turk was disestablished. Although there is no mention of East Cay, we thought you may find the enclosed background data on how Grand Turk and the Caicos were used helpful.

As you can see from one of the maps, there were trigonometrical stations located on some of the adjacent cays. East Cay may be one of cays shown as having a different name. If you have any questions, you may contact me at 757-322-4926 or <mailto:sandra.frantz@navy.mil>.

Sincerely,

Ms. Sandy Frantz  
Real Estate Contracting Officer  
North Carolina/Caribbean IPT  
By direction of the Commander

Encl

***Quality Performance ... Quality Results***

## APPENDIX B FREEDOM OF INFORMATION ACT RESPONSE #2

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**DEPARTMENT OF THE NAVY**  
HEADQUARTERS, NAVAL SECURITY GROUP COMMAND  
9800 SAVAGE ROAD, SUITE 6585  
FORT GEORGE G. MEADE MD 20755-6585

**To:** Mr. Peter T. Sinelli  
University of Florida  
Archaeology Department  
1307 Monte Lake Drive  
Valrico, FL 33594

**From:** Dr. John R. Schindler  
Command Historian

02 November 2004

Dear Mr. Sinelli,

I recently received your FOIA request to the Department of Defense, submitted online on 24 June 2004. I read it with interest and was intrigued. Unfortunately, research into Naval Security Group (CNSG) activities and sites has revealed no connection to the outpost you describe on East Cay (Pinzon Cay), Turks and Caicos, BWI. I made additional inquiries to CNSG veterans, and to the Office of Naval Intelligence (ONI), without success. What you encountered sounds like a onetime U.S. Government – and probably U.S. Navy – activity, but I can find no records of it having any connection to my command.

Your FOIA request has been forwarded to other U.S. Navy elements, and I hope they can assist you in identifying this site. If you wish to contact me, feel free to do so.

Very Respectfully,

A handwritten signature in black ink, appearing to read "J.R. Schindler".

J.R. Schindler

240.373.3632 tel  
240.373.3412 fax  
[jrschin@hqcnsg.navy.mil](mailto:jrschin@hqcnsg.navy.mil)

cc: Ms. Sarah English, USN/CNO/FOIA

## APPENDIX C RADIOCARBON REPORTS



*Consistent Accuracy  
Delivered On Time.*

### Beta Analytic Inc.

4985 SW 74 Court  
Miami, Florida 33155 USA  
Tel: 305 667 5167  
Fax: 305 663 0964  
[beta@radiocarbon.com](mailto:beta@radiocarbon.com)  
[www.radiocarbon.com](http://www.radiocarbon.com)

**MR. DARDEN HOOD**  
Director

**Mr. Ronald Hatfield**  
**Mr. Christopher Patrick**  
Deputy Directors

April 22, 2008

Mr. Pete Sinelli  
1339 Utah Boulevard  
Orlando, FL 32803  
USA

RE: Radiocarbon Dating Results For Samples SPUD UNITAL5, SPUD FS21, SPUD FS22, MIDD FS13, MIDD FS36, PELI FS7, GIBB FS3

Dear Mr. Sinelli:

Enclosed are the radiocarbon dating results for seven samples recently sent to us. They each provided plenty of carbon for accurate measurements and all the analyses proceeded normally. The report sheet contains the dating result, method used, material type, applied pretreatment and two-sigma calendar calibration result (where applicable) for each sample.

This report has been both mailed and sent electronically, along with a separate publication quality calendar calibration page. This is useful for incorporating directly into your reports. It is also digitally available in Windows metafile (.wmf) format upon request. Calibrations are calculated using the newest (2004) calibration database. References are quoted on the bottom of each calibration page. Multiple probability ranges may appear in some cases, due to short-term variations in the atmospheric <sup>14</sup>C contents at certain time periods. Examining the calibration graphs will help you understand this phenomenon. Calibrations may not be included with all analyses. The upper limit is about 20,000 years, the lower limit is about 250 years and some material types are not suitable for calibration (e.g. water).

We analyzed these samples on a sole priority basis. No students or intern researchers who would necessarily be distracted with other obligations and priorities were used in the analyses. We analyzed them with the combined attention of our entire professional staff.

Information pages are enclosed with the mailed copy of this report. They should answer most of questions you may have. If they do not, or if you have specific questions about the analyses, please do not hesitate to contact us. Someone is always available to answer your questions.

The cost of the analysis was charged to the American Express card provided. A receipt is enclosed. Thank you. As always, if you have any questions or would like to discuss the results, don't hesitate to contact me.

Sincerely,



# BETA ANALYTIC INC.

DR. M.A. TAMERS and MR. D.G. HOOD

UNIVERSITY BRANCH  
4985 S.W. 74 COURT  
MIAMI, FLORIDA, USA 33155  
PH: 305/667-5167 FAX: 305/663-0964  
E-MAIL: beta@radiocarbon.com

## REPORT OF RADIOCARBON DATING ANALYSES

Mr. Pete Sinelli

Report Date: 4/22/2008

Material Received: 3/18/2008

Sample Data	Measured Radiocarbon Age	$^{13}\text{C}/^{12}\text{C}$ Ratio	Conventional Radiocarbon Age(*)
Beta - 242670  SAMPLE : SPUD UNITALS ANALYSIS : AMS-Standard delivery MATERIAL/PRETREATMENT : (charred material): acid/alkali/acid 2 SIGMA CALIBRATION : Cal AD 1260 to 1320 (Cal BP 690 to 630) AND Cal AD 1350 to 1390 (Cal BP 600 to 560)	690 +/- 40 BP	-24.7 o/oo	690 +/- 40 BP
Beta - 242671  SAMPLE : SPUD FS21 ANALYSIS : AMS-Standard delivery MATERIAL/PRETREATMENT : (charred material): acid/alkali/acid 2 SIGMA CALIBRATION : Cal AD 1290 to 1420 (Cal BP 660 to 530)	610 +/- 40 BP	-25.4 o/oo	600 +/- 40 BP
Beta - 242672  SAMPLE : SPUD FS22 ANALYSIS : AMS-Standard delivery MATERIAL/PRETREATMENT : (charred material): acid/alkali/acid 2 SIGMA CALIBRATION : Cal AD 1030 to 1220 (Cal BP 920 to 730)	910 +/- 40 BP	-25.6 o/oo	900 +/- 40 BP
Beta - 242673  SAMPLE : MIDD FS13 ANALYSIS : Radiometric-Standard delivery MATERIAL/PRETREATMENT : (shell): acid etch 2 SIGMA CALIBRATION : Cal AD 1040 to 1260 (Cal BP 910 to 690)	790 +/- 50 BP	+2.9 o/oo	1250 +/- 50 BP
Beta - 242674  SAMPLE : MIDD FS36 ANALYSIS : Radiometric-Standard delivery MATERIAL/PRETREATMENT : (shell): acid etch 2 SIGMA CALIBRATION : Cal AD 1340 to 1490 (Cal BP 610 to 460)	460 +/- 40 BP	+1.7 o/oo	900 +/- 50 BP

Dates are reported as RCYBP (radiocarbon years before present, "present" = 1950 A.D.). By International convention, the modern reference standard was 95% of the C14 content of the National Bureau of Standards' Oxalic Acid & calculated using the Libby C14 half life (5568 years). Quoted errors represent 1 standard deviation statistics (68% probability) & are based on combined measurements of the sample, background, and modern reference standards.

Measured C13/C12 ratios were calculated relative to the PDB-1 international standard and the RCYBP ages were normalized to -25 per mil. If the ratio and age are accompanied by an (\*), then the C13/C12 value was estimated, based on values typical of the material type. The quoted results are NOT calibrated to calendar years. Calibration to calendar years should be calculated using the Conventional C14 age.



## BETA ANALYTIC INC.

DR. M.A. TAMERS and MR. D.G. HOOD

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PH: 305/667-5167 FAX: 305/663-0964  
E-MAIL: beta@radiocarbon.com

## REPORT OF RADIOCARBON DATING ANALYSES

Mr. Pete Sinelli

Report Date: 4/22/2008

Sample Data	Measured Radiocarbon Age	13C/12C Ratio	Conventional Radiocarbon Age(*)
Beta - 242675 SAMPLE : PELI FS7 ANALYSIS : Radiometric-Standard delivery MATERIAL/PRETREATMENT : (shell): acid etch 2 SIGMA CALIBRATION : Cal AD 980 to 1180 (Cal BP 970 to 770)	850 +/- 50 BP	+4.3 ‰	1330 +/- 50 BP
Beta - 242676 SAMPLE : GIBB FS3 ANALYSIS : Radiometric-Standard delivery MATERIAL/PRETREATMENT : (shell): acid etch 2 SIGMA CALIBRATION : Cal AD 1490 to 1680 (Cal BP 460 to 270)	260 +/- 50 BP	+1.8 ‰	700 +/- 50 BP

Dates are reported as RCYBP (radiocarbon years before present, "present" = 1950A.D.). By International convention, the modern reference standard was 95% of the C14 content of the National Bureau of Standards' Oxalic Acid & calculated using the Libby C14 half life (5568 years). Quoted errors represent 1 standard deviation statistics (68% probability) & are based on combined measurements of the sample, background, and modern reference standards.

Measured C13/C12 ratios were calculated relative to the PDB-1 international standard and the RCYBP ages were normalized to -25 per mil. If the ratio and age are accompanied by an (\*), then the C13/C12 value was estimated, based on values typical of the material type. The quoted results are NOT calibrated to calendar years. Calibration to calendar years should be calculated using the Conventional C14 age.

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## CALIBRATION OF RADIOCARBON AGE TO CALENDAR YEARS

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(Variables: C13/C12=-24.7:lab. mult=1)

Laboratory number: Beta-242670

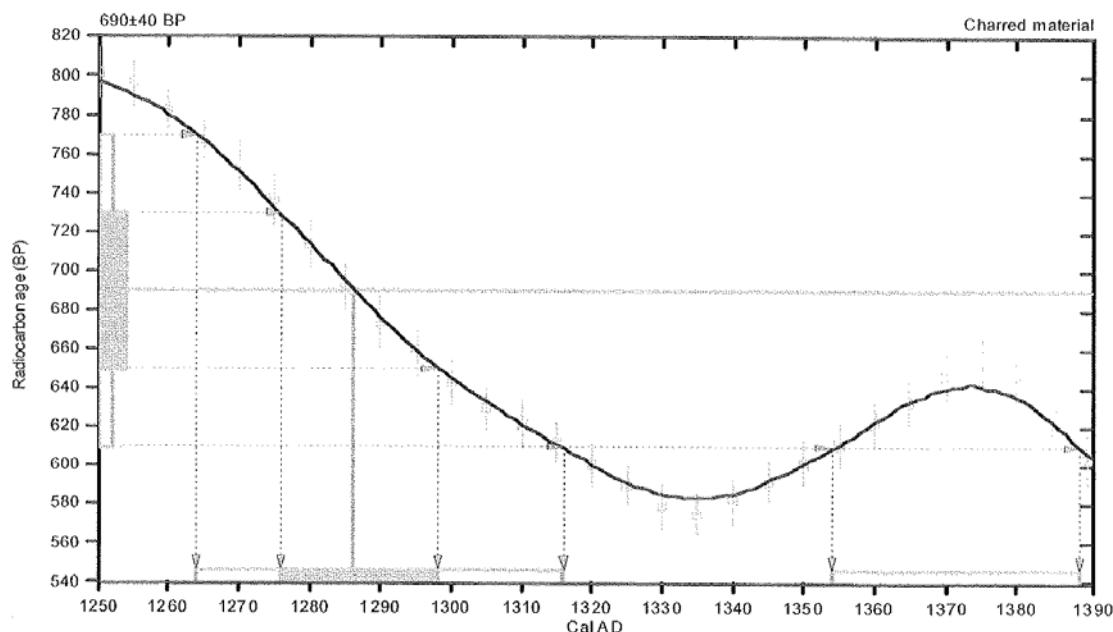
Conventional radiocarbon age: 690±40 BP

2 Sigma calibrated results: Cal AD 1260 to 1320 (Cal BP 690 to 630) and  
(95% probability) Cal AD 1350 to 1390 (Cal BP 600 to 560)

Intercept data

Intercept of radiocarbon age  
with calibration curve: Cal AD 1290 (Cal BP 660)

1 Sigma calibrated result: Cal AD 1280 to 1300 (Cal BP 670 to 650)  
(68% probability)



References:

Database used

INTCAL04

Calibration Database

INTCAL04 Radiocarbon Age Calibration

IntCal04: Calibration Issue of Radiocarbon (Volume 46, nr 3, 2004).

Mathematics

A Simplified Approach to Calibrating C14 Dates

Talma, A. S., Vogel, J. C., 1993, Radiocarbon 35(2), p317-322

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## Beta Analytic Radiocarbon Dating Laboratory

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## CALIBRATION OF RADIOCARBON AGE TO CALENDAR YEARS

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(Variables: C13/C12=-25.4;lab. mult=1)

Laboratory number: Beta-242671

Conventional radiocarbon age: 600±40 BP

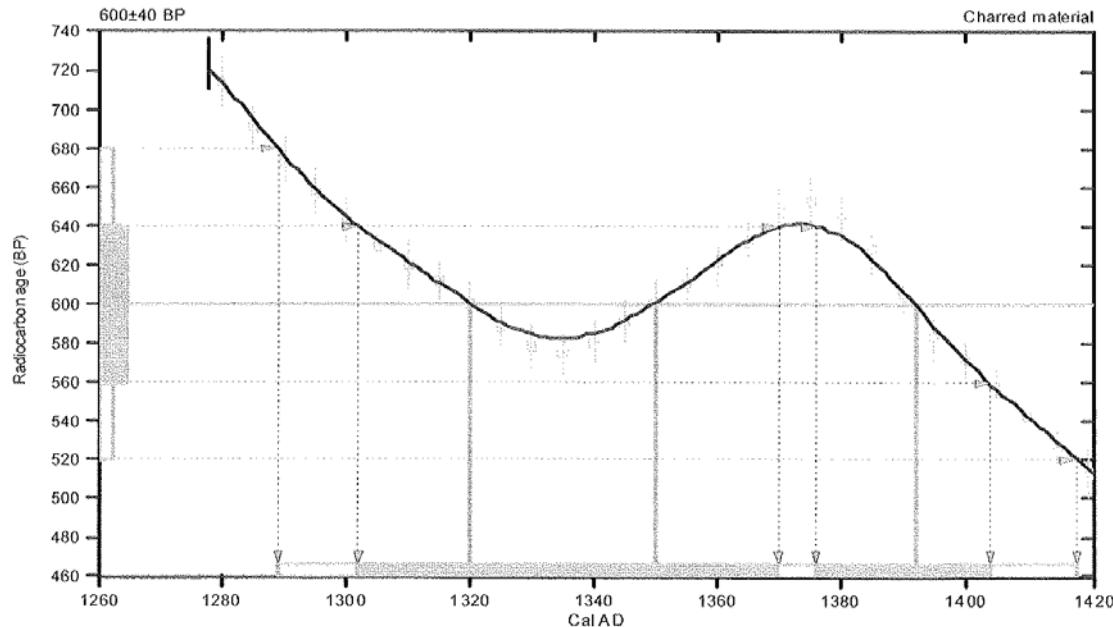
2 Sigma calibrated result: Cal AD 1290 to 1420 (Cal BP 660 to 530)  
(95% probability)

Intercept data

Intercepts of radiocarbon age

with calibration curve: Cal AD 1320 (Cal BP 630) and  
Cal AD 1350 (Cal BP 600) and  
Cal AD 1390 (Cal BP 560)

1 Sigma calibrated results: Cal AD 1300 to 1370 (Cal BP 650 to 580) and  
(68% probability) Cal AD 1380 to 1400 (Cal BP 570 to 550)



References:

Database used

INTCAL04

Calibration Database

INTCAL04 Radiocarbon Age Calibration

IntCal04: Calibration Issue of Radiocarbon (Volume 46, nr 3, 2004).

Mathematics

A Simplified Approach to Calibrating C14 Dates

Talma, A. S., Vogel, J. C., 1993, Radiocarbon 35(2), p317-322

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## CALIBRATION OF RADIOCARBON AGE TO CALENDAR YEARS

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(Variables: C13/C12=-25.6:lab. mult=1)

Laboratory number: Beta-242672

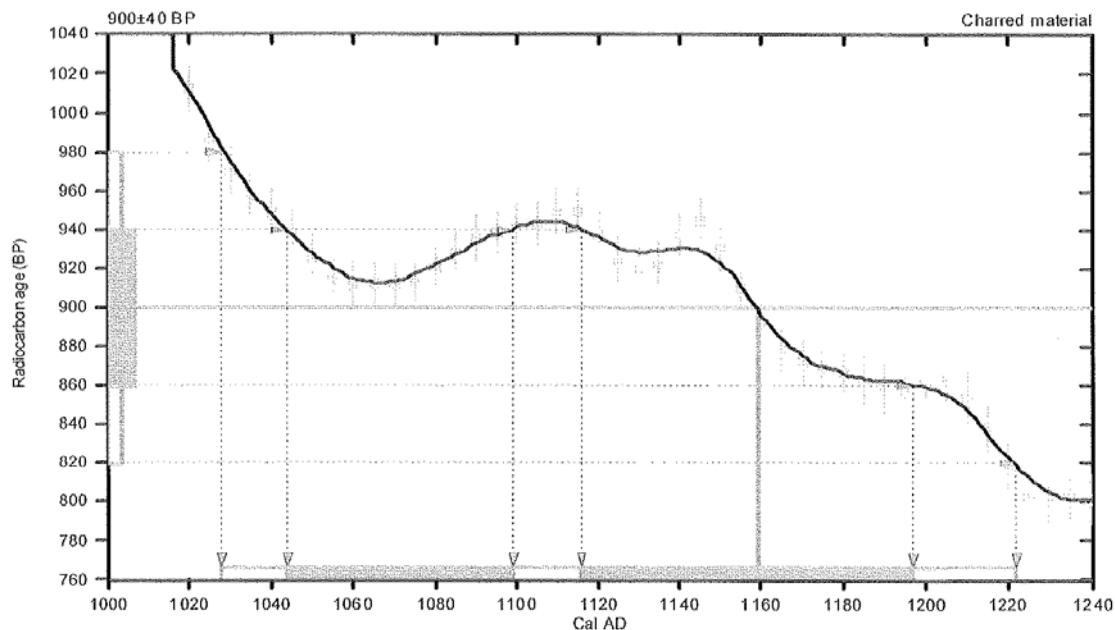
Conventional radiocarbon age: 900±40 BP

2 Sigma calibrated result: Cal AD 1030 to 1220 (Cal BP 920 to 730)  
(95% probability)

Intercept data

Intercept of radiocarbon age  
with calibration curve: Cal AD 1160 (Cal BP 790)

1 Sigma calibrated results: Cal AD 1040 to 1100 (Cal BP 910 to 850) and  
(68% probability) Cal AD 1120 to 1200 (Cal BP 830 to 750)



References:

Database used

INTCAL04

Calibration Database

INTCAL04 Radiocarbon Age Calibration

IntCal04: Calibration Issue of Radiocarbon (Volume 46, nr 3, 2004).

Mathematics

A Simplified Approach to Calibrating C14 Dates

Talma, A. S., Vogel, J. C., 1993, Radiocarbon 35(2), p317-322

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## CALIBRATION OF RADIOCARBON AGE TO CALENDAR YEARS

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(Variables: C13/C12=2.9;Delta-R=-5±20;Glob res=-200 to 500;lab. mult=1)

Laboratory number: Beta-242673

Conventional radiocarbon age: 1250±50 BP

(1260±50 adjusted for local reservoir correction)

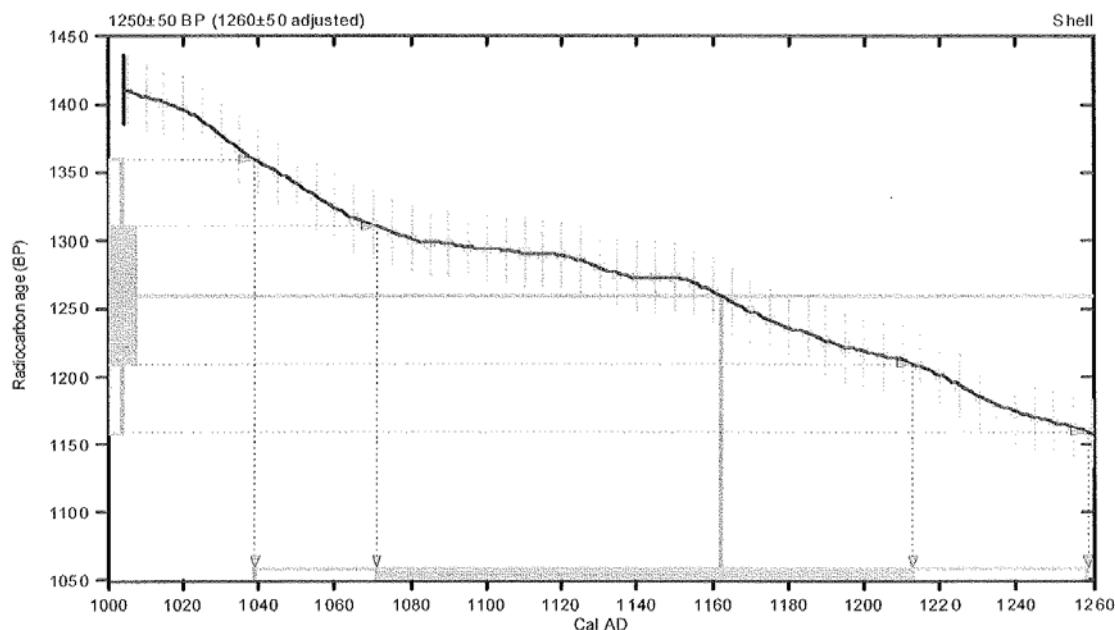
2 Sigma calibrated result: Cal AD 1040 to 1260 (Cal BP 910 to 690)  
(95% probability)

Intercept data

Intercept of radiocarbon age

with calibration curve: Cal AD 1160 (Cal BP 790)

1 Sigma calibrated result: Cal AD 1070 to 1210 (Cal BP 880 to 740)  
(68% probability)



References:

Database used

MARINE04

Calibration Database

INTCAL04 Radiocarbon Age Calibration

IntCal04: Calibration Issue of Radiocarbon (Volume 46, nr 3, 2004).

Mathematics

A Simplified Approach to Calibrating C14 Dates

Talma, A. S., Vogel, J. C., 1993, Radiocarbon 35(2), p317-322

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## CALIBRATION OF RADIOCARBON AGE TO CALENDAR YEARS

---

(Variables: C13/C12=1.7;Delta-R=-5±20;Glob res=-200 to 500;lab. mult=1)

Laboratory number: Beta-242674

Conventional radiocarbon age: 900±50 BP

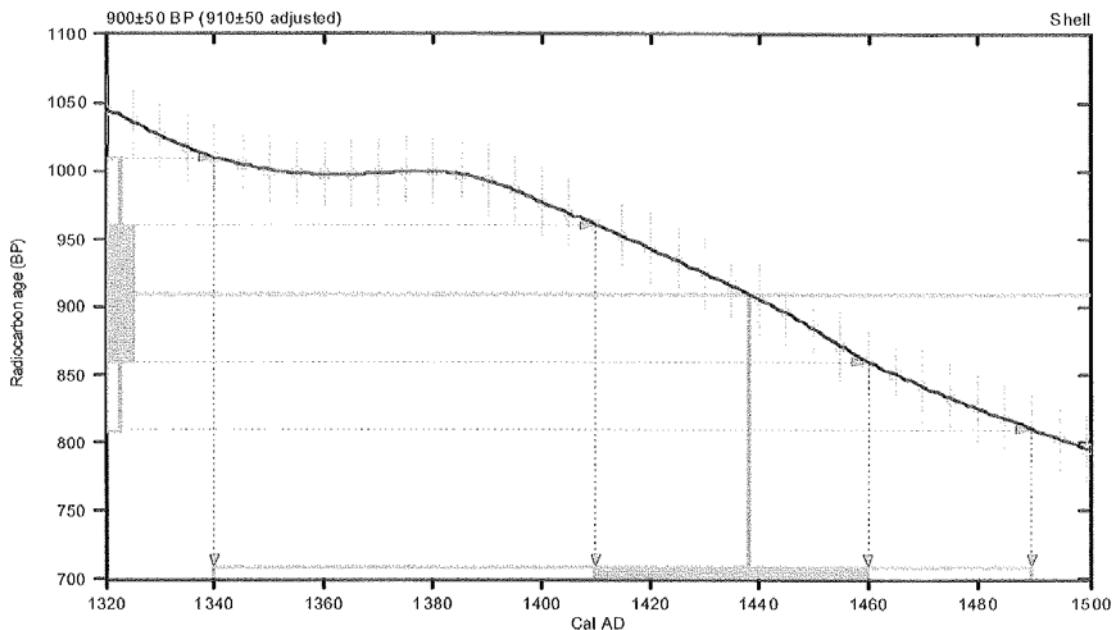
(910±50 adjusted for local reservoir correction)

2 Sigma calibrated result: Cal AD 1340 to 1490 (Cal BP 610 to 460)  
(95% probability)

Intercept data

Intercept of radiocarbon age  
with calibration curve: Cal AD 1440 (Cal BP 510)

1 Sigma calibrated result: Cal AD 1410 to 1460 (Cal BP 540 to 490)  
(68% probability)



References:

Database used

MARINE04

Calibration Database

INTCAL04 Radiocarbon Age Calibration

IntCal04: Calibration Issue of Radiocarbon (Volume 46, nr 3, 2004).

Mathematics

A Simplified Approach to Calibrating C14 Dates

Talma, A. S., Vogel, J. C., 1993, Radiocarbon 35(2), p317-322

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---

## CALIBRATION OF RADIOCARBON AGE TO CALENDAR YEARS

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(Variables: C13/C12=4.3:Delta-R=-5±20:Glob res=-200 to 500:lab. mult=1)

Laboratory number: Beta-242675

Conventional radiocarbon age: 1330±50 BP

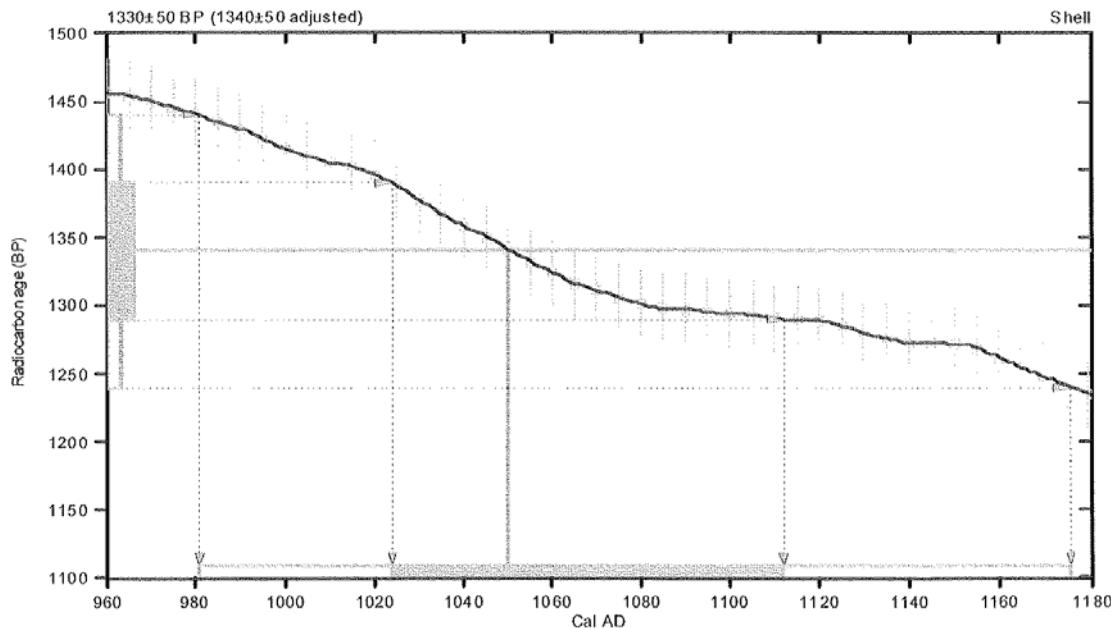
(1340±50 adjusted for local reservoir correction)

2 Sigma calibrated result: Cal AD 980 to 1180 (Cal BP 970 to 770)  
(95% probability)

Intercept data

Intercept of radiocarbon age  
with calibration curve: Cal AD 1050 (Cal BP 900)

1 Sigma calibrated result: Cal AD 1020 to 1110 (Cal BP 930 to 840)  
(68% probability)



References:

Database used

MARINE04

Calibration Database

INTCAL04 Radiocarbon Age Calibration

IntCal04: Calibration Issue of Radiocarbon (Volume 46, nr 3, 2004).

Mathematics

A Simplified Approach to Calibrating C14 Dates

Talma, A. S., Vogel, J. C., 1993, Radiocarbon 35(2), p317-322

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## Beta Analytic Radiocarbon Dating Laboratory

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## CALIBRATION OF RADIOCARBON AGE TO CALENDAR YEARS

(Variables: C13/C12=1.8;Delta-R=-5±20;Glob res=-200 to 500;lab. mult=1)

Laboratory number: Beta-242676

Conventional radiocarbon age: 700±50 BP

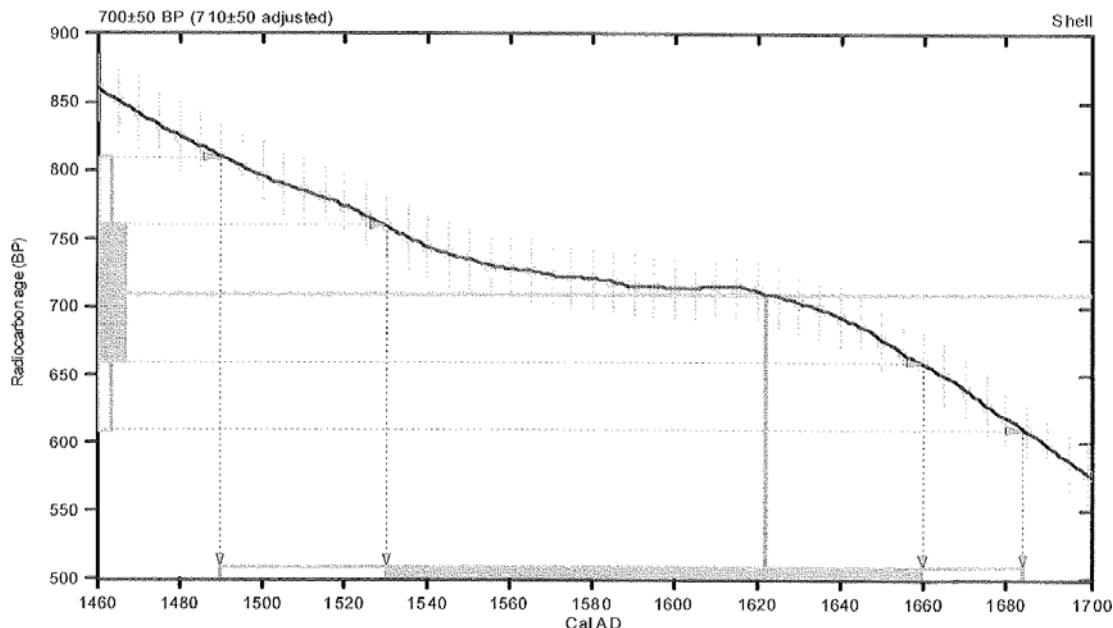
(710±50 adjusted for local reservoir correction)

2 Sigma calibrated result: Cal AD 1490 to 1680 (Cal BP 460 to 270)  
(95% probability)

Intercept data

Intercept of radiocarbon age  
with calibration curve: Cal AD 1620 (Cal BP 330)

1 Sigma calibrated result: Cal AD 1530 to 1660 (Cal BP 420 to 290)  
(68% probability)



### References:

#### Database used

MARINE04

#### Calibration Database

INTCAL04 Radiocarbon Age Calibration

IntCal04: Calibration Issue of Radiocarbon (Volume 46, nr 3, 2004).

#### Mathematics

A Simplified Approach to Calibrating C14 Dates

Talma, A. S., Vogel, J. C., 1993, Radiocarbon 35(2), p317-322

## Beta Analytic Radiocarbon Dating Laboratory

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*Consistent Accuracy...  
... Delivered On-time*

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www.radiocarbon.com

Darden Hood  
President

Ronald Hatfield  
Christopher Patrick  
Deputy Directors

January 6, 2009

Mr. Pete Sinelli  
1339 Utah Boulevard  
Orlando, FL 32803  
USA

RE: Radiocarbon Dating Result For Sample GIBB FS24

Dear Mr. Sinelli:

Enclosed is the radiocarbon dating result for one sample recently sent to us. It provided plenty of carbon for an accurate measurement and the analysis proceeded normally. As usual, the method of analysis is listed on the report sheet and calibration data is provided where applicable.

As always, no students or intern researchers who would necessarily be distracted with other obligations and priorities were used in the analysis. It was analyzed with the combined attention of our entire professional staff.

If you have specific questions about the analyses, please contact us. We are always available to answer your questions.

The cost of the analysis was charged to the MASTERCARD card provided. A receipt is enclosed with the mailed report copy. Thank you. As always, if you have any questions or would like to discuss the results, don't hesitate to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read "Darden Hood".  
Digital signature on file

**BETA****BETA ANALYTIC INC.**

DR. M.A. TAMERS and MR. D.G. HOOD

4985 S.W. 74 COURT  
MIAMI, FLORIDA, USA 33155  
PH. 305-667-5167 FAX 305-663-0964  
[beta@radlocarbon.com](mailto:beta@radlocarbon.com)**REPORT OF RADIOCARBON DATING ANALYSES**

Mr. Pete Sinelli

Report Date: 1/6/2009

Material Received: 12/18/2008

Sample Data	Measured Radiocarbon Age	$\delta^{13}\text{C}/\text{C}$ Ratio	Conventional Radiocarbon Age(*)
Beta - 253527 SAMPLE : GIBB FS24 ANALYSIS : AMS-Standard delivery MATERIAL/PRETREATMENT : (charred material): acid/alkali/acid 2 SIGMA CALIBRATION : Cal AD 1170 to 1280 (Cal BP 780 to 670)	780 +/- 40 BP	-24.5 ‰	790 +/- 40 BP

Dates are reported as RCYBP (radiocarbon years before present, "present" = AD 1950). By international convention, the modern reference standard was 95% the  $^{14}\text{C}$  activity of the National Institute of Standards and Technology (NIST) Oxalic Acid (SRM 4990C) and calculated using the Libby  $^{14}\text{C}$  half-life (5568 years). Quoted errors represent 1 relative standard deviation statistics (68% probability) counting errors based on the combined measurements of the sample, background, and modern reference standards. Measured  $\delta^{13}\text{C}/\text{C}$  ratios (delta  $^{13}\text{C}$ ) were calculated relative to the PDB-1 standard.

The Conventional Radiocarbon Age represents the Measured Radiocarbon Age corrected for isotopic fractionation, calculated using the delta  $^{13}\text{C}$ . On rare occasion where the Conventional Radiocarbon Age was calculated using an assumed delta  $^{13}\text{C}$ , the ratio and the Conventional Radiocarbon Age will be followed by "a". The Conventional Radiocarbon Age is not calendar calibrated. When available, the Calendar Calibrated result is calculated from the Conventional Radiocarbon Age and is listed as the "Two Sigma Calibrated Result" for each sample.

## CALIBRATION OF RADIOCARBON AGE TO CALENDAR YEARS

(Variables: C13/C12=-24.5; lab. mult=1)

Laboratory number: Beta-253527

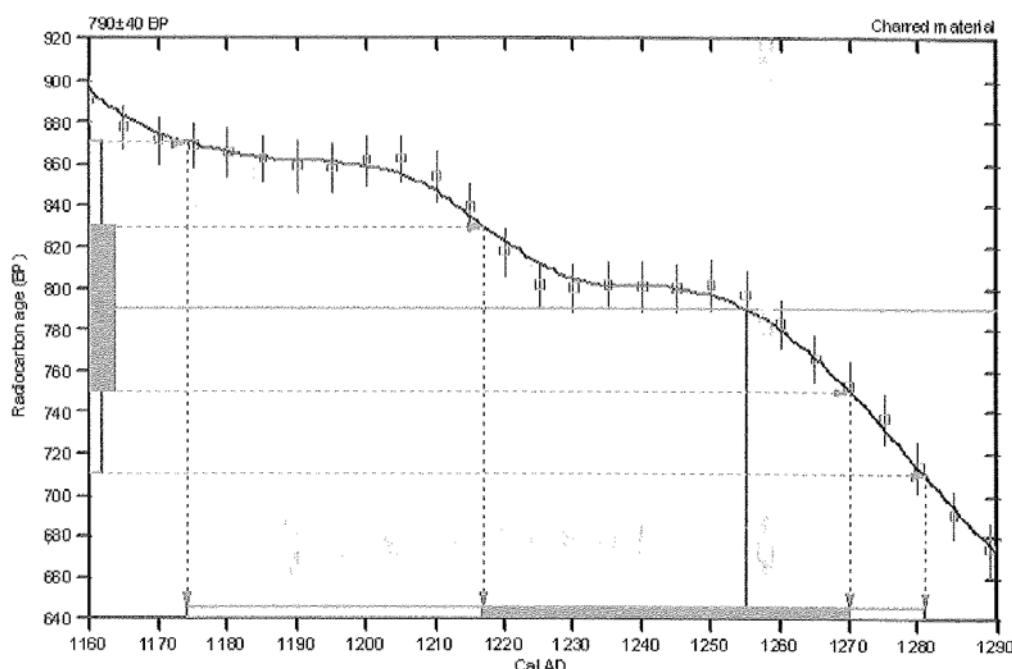
Conventional radiocarbon age: 790±40 BP

2 Sigma calibrated result: Cal AD 1170 to 1280 (Cal BP 780 to 670)  
(95% probability)

Intercept data

Intercept of radiocarbon age  
with calibration curve: Cal AD 1260 (Cal BP 700)

1 Sigma calibrated result: Cal AD 1220 to 1270 (Cal BP 730 to 680)  
(68% probability)



### References:

- Database used  
INTCAL04  
Calibration Database  
INTCAL04 Radiocarbon Age Calibration  
IntCal04: Calibration Issues of Radiocarbon (Volume 46, nr 3, 2004).  
Mathematics  
A Simplified Approach to Calibrating C14 Dates  
Talma, A. S., Vogel, J. C., 1993, Radiocarbon 35(2), p317-322

### Beta Analytic Radiocarbon Dating Laboratory

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## BIOGRAPHICAL SKETCH

Pete Sinelli was born in Dearborn, Michigan. He moved with his family in 1975 to Jacksonville, Florida, which inured in him a lifelong appreciation for the climate and lifestyle of the Sunshine State. After a brief sojourn to Atlanta, the Sinellis returned to Jacksonville in 1981. In time, Pete graduated near the top of his class from Bishop Kenny High School in 1988. He still regards Jacksonville as his home town, and remains an ardent Jaguars fan.

As the son of successful entrepreneurs, Pete intended to pursue a career in business. He graduated from Indiana University's Kelley School of Business with a BS in finance in 1992. Even so, the "study of man" was never far from his mind: he was the only finance major in his class to also minor in anthropology. After graduation, he embarked upon a predictable path and accepted a position in Chicago with The Northern Trust Company in commercial lending and treasury management sales. After meeting Amy, he relocated to Columbus, Ohio in 1996 and joined the family business.

Pete worked with Sinelli and Associates as an executive recruiter and insurance industry consultant for nearly three more years. At some point in 1997, he could no longer silence the little voice he heard in the back of his head that kept repeating: "You love archaeology! Go be an archaeologist!" That fall, he spoke first to his wife, and then to his parents, about leaving the family company and pursuing his dream. They wholeheartedly supported him then, as they have throughout the entire process. Amy even uprooted her legal practice, studied hard to pass the Florida Bar, and moved away from her family in Ohio to Gainesville so he could matriculate at the University of Florida and study the nuances of vanished prehistoric civilizations of the Caribbean.

Several jobs, four relocations, and two kids later, Pete finds himself in Orlando, Florida where he has been on the anthropology faculty at the University of Central Florida for the last 4 years. Pete currently resides near downtown Orlando with his wife Amy and young sons Michael and Alexander.