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An archaeological study of architectural form and function at Indian Key, Florida

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An Archaeological Study of Architectural Form and
Function at Indian Key, Florida

by

Kelly A. Driscoll

A thesis submitted in partial fulfillment
of the requirements for the degree of
Master of Arts
Department of Anthropology
College of Arts and Sciences
University of South Florida

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An Archaeological Study of Architectural Form and Function at Indian Key, Florida

Kelly A. Driscoll

ABSTRACT

Indian Key Historic State Park is a small island located on the Atlantic Ocean side of the Florida Keys, near Islamorada. Before it was bought by the state of Florida in 1970, Indian Key had been the setting for a number of historically significant activities. The most well known of these is the 1840 raid on the people and buildings that made up a small wrecking village, established on the island by Jacob Housman in the early 1830s. The limestone foundations of these structures are the main attraction to today’s visitor to the park.

There is more to the story of Indian Key, though, than the Housman period and the structural remains left behind from this stage of the island’s history. Almost immediately after the near destruction of the island in 1840, the Florida Squadron of the Navy took over, constructing their own buildings, and re-using some of the previously constructed foundations. This cycle of rebuilding and re-use continued for another hundred years, with families and fishers trying to inhabit and profit from Indian Key.

The focus of this thesis is to examine the foundations and associated archaeological features of Indian Key in order to determine better periods of use and re-use for the buildings that have been identified through archaeological investigations.
This research was conducted in order to examine the site’s architecture through an archaeological perspective; it is by no means an attempt at a complete architectural study of the site. Rather, it is an effort to examine the entire island of Indian Key, by focusing on the history of the buildings that helped make it an important piece of Florida’s past.
Chapter One: Introduction

Many of the Florida Keys have “untold stories” of pirates and treasure, or so local guides tell the masses of tourists who swarm to the area every year, but Indian Key, an unassuming little island just 11 acres in size, has a real life story of piracy, intrigue, and history stored within the ruined building foundations scattered between its shores. The history of Indian Key Historic State Park, or 8MO15, its Florida Master Site File (FMSF) number, has been the focus of archaeological (Baker 1973, Eyster 1965), historical (Schene 1973) and fictional (Hess 1978) writings, many of which were completed after the state acquired the island in December of 1970. Before the University of South Florida began its investigation of Indian Key, all of the previous archaeological studies of the site had either focused specifically on the artifacts (Eyster 1965), or had used a whole-site approach to look at the island solely as a repository for the artifacts found in the ground (Baker 1973). Matero and Fong’s (1997) report on the proposed conservation of Indian Key provided a bridge between the archaeological data collected and the growing concern of stabilizing and conserving the foundation remains at Indian Key. Furthermore, this report led to a joint project involving the University of Pennsylvania’s historic conservation program, the University of South Florida’s archaeological research investigation, and the Florida Park Service.
Historical archaeologists tend to focus on smaller artifacts such as glass, ceramics or metals located within or around a larger structure, dismissing to some degree the building that individuals (and their material goods) were drawn to initially.

The intention of this thesis is to look at the entire site of Indian Key as an artifact, by focusing on the foundation remains of the structures that once made the island an important and historically significant piece of Florida history. This research was conducted in order to examine the site’s architecture through an archaeological perspective, and is by no means an attempt at a complete architectural study of the site. Rather, it is an effort to focus on materials that archaeologists sometimes overlook.

Very little information is available in the form of documentary evidence concerning the structures that once stood upon this small island. A few maps exist (Howe 1840, Perrine 1885) that document the approximate locations of buildings during Indian Key’s most prosperous era, but descriptions of these buildings, besides a few brief and vague mentions in historical narratives, are scarce.

Some of the methodologies employed in this thesis included the study of these historic maps and documents related to Indian Key. These items illustrate the long and varied history of use of the key, as well as the utilization of a grid system in the historic landscape of Indian Key and the ways in which this type of layout was used to separate the island’s inhabitants according to class and gender. Archaeological excavations and mapping were also a part of this research. Two trips to Indian Key during the early part of 2000 resulted in the archaeological testing of three separate areas, many different phases of mapping, including an entire brick floor of one of the archaeological features,
and the recovery of hundreds of historic artifacts. Even with all of this material, it is impossible to present a complete history of the architecture of Indian Key or of the island itself.

There is no doubt that Jacob Housman set up Indian Key in the 1830s using a town plan and a set of construction guidelines that must have been followed. This information was most likely lost during the fire that claimed thirteen lives and most of the original buildings on Indian Key during the summer of 1840. This thesis attempts to examine the architecture through archaeological investigations and research in order to place the remains and modifications made to these structures within a specific time period, and to help recognize potential areas of research for the future. The ways in which buildings were constructed, the materials used, and the placement of these structures are all topics taken into account and addressed.
Chapter Two: Environmental and Cultural Overview

Environmental History of Indian Key

Indian Key is an approximately 11-acre island situated less than one-mile southeast of the chain of the Florida Keys in the Atlantic Ocean (Figures 1 and 2). The mean average temperature for this area is about 78 degrees F, and the mean annual precipitation is approximately 50 inches (Hurt et al. 1995). Both of these factors have a major influence on the types and styles of buildings constructed in the Keys. Temperature dictates the need for breezeways and porches, and rainfall, or the lack thereof, cisterns. The maximum elevation on the key is 8 to 10 feet above mean sea level (amsl), and the submerged lands belonging to Indian Key State Historic Site are also shallow in depth. The average depth of Indian Key Channel, located to the north of the island, is 12 ft., while Lignumvitae Channel to the northwest, averages approximately 7.5 ft.

Rain is the primary source of freshwater in the Florida Keys, and on Indian Key. Historically, cisterns, wells, and solution holes from the small, shallow, freshwater lenses formed in the limestone during the rainy season were all the ways that water was collected. Throughout the rest of the peninsula, water is supplied by underground aquifers. Key Largo Limestone, of which the Upper Keys, including Indian Key, are made, forms a part of the Biscayne aquifer of the surficial aquifer system. This aquifer
provides water for areas of Dade, Broward and Monroe counties (Hyde 1965). Until recently, fresh water from the Biscayne aquifer was available in at least one location on north Key Largo. Salt-water intrusion resulting from the drainage of the Everglades and the canalization of southeast Florida disrupted the aquifer and changed the regional hydrology of the Keys (DEP 2000a).

**Figure 1.** Location of Indian Key as shown on the Upper Matecumbe Key 1971 USGS 7.5’ topographic quadrangle.
Only one type of soil is mapped for Indian Key (Hurt et. al. 1995: Sheet 20 inset). Pennekamp gravely muck, 0 to 2 percent slopes, extremely stony, is a well-drained soil characterized by a thin layer of organic debris and leaf layer over the coral limestone bedrock. Found on uplands, this soil has a depth of 4 to 16 inches, while the elevations normally found within this soil type are 5 to 15 ft. amsl. Most areas of this soil support native vegetation and are used as habitat for tropical hammock species. This vegetation includes poisonwood, wild tamarind, gumbo-limbo, strangler fig and wild coffee. The upland vegetation at Indian Key consists mostly of exotic species brought to the island by Dr. Henry Perrine (a noted botanist who arrived at Indian Key with his family in 1838), although native species are found scattered throughout the key. Land uses for an area with Pennekamp gravely muck is limited due to the fact that it is prone to flooding, and has such a shallow depth (Hurt et. al. 1995).

Figure 2. Aerial photograph of Indian Key (Feil 2001).
Recent changes to the island’s landscape include the addition of an observation tower, the clearing of paths and the town square (Figure 3), and the construction of a new dock and shelter. The previous dock was destroyed by Hurricane Georges in 1998, which also forced the FPS to cease all tours of Indian Key until a new dock was built.

**Geological Description**

Indian Key falls within the Southern or Distal zone of Florida, as White (1970) divided it. This zone extends up from the southern end of the peninsula to an imaginary line that crosses the state in the general vicinity of Stuart on the east coast over to Fort Myers on the west coast. This area is quite distinct in that it is the only place in the entire Atlantic-Gulf of Mexico coast of the United States where land extends all the way to the outer edge of the Continental Shelf. This phenomenon is most likely the result of the rapid deposition of carbonates from the tropical water of the Florida current. Coral reefs establish themselves in these same areas, and in some instances, provide a protected area where carbonate can accumulate and form land masses, as is the case for the Florida Keys (Randazzo and Halley 1997, White 1970).

The Florida Keys are further separated into the High Coral Keys (Soldier Key to Upper Matecumbe), the Low Coral Keys (Lower Matecumbe to Newfound Harbor Key), and the Oolite Keys (Pigeon Key to Key West), in order to discuss their unique characteristics (Figure 4). Indian Key is in the southern portion of the High Coral Keys (also referred to as the Upper Keys) (DEP 2000b, Randazzo and Halley 1997, White 1970: Map 1-C). These keys are comprised of Key Largo Limestone, and are oriented
parallel to the continental shelf. This specific type of limestone plays an important part in the architecture of Indian Key, and is present in the subsurface of Florida from Miami to the Dry Tortugas, with an average thickness of over 60 m (Hoffmeister 1974).

**Figure 3.** Indian Key town square as it appears today. Photograph taken by the author on June 6, 2003, facing north.

Key Largo Limestone is a coralline limestone composed of coral heads encased in a matrix of calcarenite (Stanley 1966), and is also part of the Pliocene-Pleistocene Series of sediments that occurs over most of the state (Scott 1992). This limestone formed 90,000 to 145,000 years ago when the sea was at its Pamlico level, approximately 6-8 m higher than today (Randazzo and Haley 1997, White 1970).

Approximately 40 percent of Key Largo Limestone is coral, the remainder is lime mud infilling and other calcareous organisms (Chiappone1996). One of the highest parts
of the Upper Keys, Windley Key, located approximately seven miles north of Indian Key on U.S. 1, has an old quarry where entire walls of Key Largo Limestone are exposed. The coral remains found within these walls are similar to the present living coral reefs offshore (DEP 2000a).

![Geological map of the Florida Keys from White (1970: Map 1-C).](image)

**Figure 4.** Geological map of the Florida Keys from White (1970: Map 1-C).

*Hurricanes*

The tropical storms that have passed through the Keys have included some of the most powerful hurricanes on record. In October of 1844, the “Cuban Hurricane” swept over Cuba and the Florida Key, saturating Key West with over 10 inches of rain. According to Barnes (1998), all of the homes and wharves on Indian Key were blown down or washed away, as the center of the storm passed very close to the island.
The most well known hurricane ever to strike the entire Keys was the Labor Day Hurricane of 1935. With sustained winds of 150 to 200 miles per hour, the hurricane destroyed everything in its path from Tavernier to Key Vaca, a distance of more than 30 miles. The overwhelming depth and flow of the storm tide wiped out buildings, roads, bridges, and an 11-car train from the East Coast Railroad, sent to Lower Matecumbe Key in an effort to rescue those that were stranded (McDonald 1935).

Of the 1935 Labor Day hurricane, noted Key West resident Ernest Hemingway states that “Indian Key [was] absolutely swept clean, not a blade of grass … the whole bottom of the sea blew over it” (Hemingway 1981:49). It was also reported that a man had been found dead in a cistern on the island after the hurricane. Also in this cistern were two railroad ties from Flagler’s Florida East Coast Railroad, which had been destroyed by this storm. This same account states that “Indian Key had been swept clean of many trees and all the wooden buildings…the masonry vestiges from Housman’s time and the more modern cisterns remained” (Griswold 1965:68).

These storms are just a small example of the brutality of the weather that has repeatedly struck Indian Key. For every large hurricane there are numerous other storms every year that repeatedly do damage to the island and the buildings that grace it. This cycle of building, destruction, and re-building has undoubtedly been a constant on the island since it was inhabited, and continues today.
Regional Prehistory /History of the Keys

The brief narrative below reflects distinct periods or events in the prehistory and history of Florida and the Keys that have had a direct effect on Indian Key, and more specifically, the architectural elements found on the island today.

Calusa and Tequesta Indians

There is very little cultural material left in the Florida Keys that dates back to the time of its earliest inhabitants. Most sites in the area consist of shell mounds and middens, and contain an archaeological assemblage that resembles the Glades culture to the north, dating back to at least A.D. 800 (Milanich 1995). Another type of site found in this area, the rock mound, can be directly related to the architecture of Indian Key, through their shared use of Key Largo Limestone.

The identification of the people that constructed these rock mounds and other prehistoric sites located within the Upper Keys is an area of archaeological research still open for debate. At the time of Spanish contact, there were two dominant groups of Native Americans in south Florida, the Tequesta and the Calusa. The Tequesta were located on the southern east coast of Florida, centered around Biscayne Bay, while the Calusa dominated the south-central portions of the state, and portion of the west coast. The exact nature of the relationship between the Keys Indians and these other groups has yet to be defined. It has been suggested (Goggin 1950) that the Keys Indians were smaller bands under the control of either the Tequesta or Calusa, and as the relative power of these two tribes fluctuated, so did the control over the Keys groups. The
Indians living in the Keys most likely both exchanged goods and paid tributes to whichever confederacy they were under at that time, most likely in the form of shipwreck booty.

The Indians who inhabited the Upper Keys are generally referred to in archaeological literature (Goggin and Sommer 1949, Goggin 1950) as Matecumbe, a term which came from references to the leader of the group of Native Americans encountered here during the Spanish exploration period. In Hann (1991), Juan López de Velasco’s account of the Indians of south Florida in 1575 is as follows:

They [the Keys], are countless, with the greater part of them inhabited by Indians subject to the cacique [chief], Carlos, great archers, and spear throwers ... The long and big island, which is at the end of the Martyrs, is also inhabited by Indians, like the others, whose cacique is called Matecumbe (Hann 1991:312-313).

No documents containing a better description of the area occupied by the Matecumbe people, or of there relationship with the larger, more powerful groups to the north have been identified as of yet. Some inferences about the way these people lived can be made however, through the archaeological investigations of the sites they left behind.

To locate any archaeological sites that may be related to Indian Key, a search of the Florida Division of Historical Resources (FDHR) Florida Master Site File (FMSF) dated November 2002 in GIS format was completed. Four rock mounds in the immediate area were identified. Two of these sites are recorded on Key Largo, near mile marker 101, to the west of US Highway 1. Key Largo 3 (8MO27), located partially within the Calusa Camp Resort grounds, is the largest and most well known of all the rock mounds.
recorded in the FMSF. Together with the black earth midden (8MO26) and other associated features located within the same complex, this rock mound was placed in the National Register of Historic Places (NRHP) in 1975.

The first archaeological investigation into the Key Largo 3 rock mound was in 1944 by John Goggin, who described the rock mound as being…

...built of limestone rocks 10 to 12 inches in diameter, laid in rough courses. The elevation of the mound is about 8 or 9 feet. A few holes have been dug into the mound by treasure seekers, but the damage is slight. These do reveal the interior construction of the mound and show that it was apparently all made of stone (Goggin 1944:17).

He further reported a sloping ramp coming off the east side of the kidney-shaped mound. Goggin recovered only one artifact, a broken shell pick, and determined that the rock mound was a ceremonial site of great importance (Goggin 1944).

Since Goggin’s visit to the site, the state of Florida has conducted two separate investigations into the Calusa Camp Resort archaeological sites. Carlos Martinez visited the Key Largo rock mound and village site complex in 1977 to evaluate their condition and interpretive archaeological potential for possible acquisition and development as a State park. Martinez (1977) found that the east side of the mound had been bulldozed three years earlier, removing all traces of the sloping ramp found by Goggin (1944). Martinez did not come to any conclusions concerning the construction of the rock mound in his report.

Twenty years after Martinez visited the rock mound, Conservation and Recreation Lands (C.A.R.L.) archaeologists Christine L. Newman and Louis D. Tesar were sent to
the site, to determine whether or not non-culturally sensitive acreage existed to permit a planned school construction. Their in-depth investigation into the Key Largo 3 rock mound revealed a much more complex construction than previously thought. Newman and Tesar found four separate, discrete stratigraphic levels in the shovel test they excavated in the north mound slope, all of which consisted of rock over a layer of soil. A conclusion that the rock mound must have been constructed before European settlers arrived in the area was made, citing the fact that the Europeans cleared rocks from their fields to gain access to organic soils, and would not have made a pile of this valuable soil only to cover it with large rocks. Five Glades Plain sherds were the only artifacts recovered from 8MO27 during this investigation. Since this type of pottery dates from 500 B.C. into the early contact era, neither a discrete use nor a firm date of occupation could be assigned to the Key Largo Rock Mound from the artifacts found at the site (Newman and Tesar 1997). Currently the rock mound is overgrown and somewhat protected in an area of dense vegetation (Figure 5).

The other rock mound on Key Largo, 8MO28 (Key Largo 4) was recorded by John Goggin in 1951 from an informant’s report of an oval rock mound approximately 30 feet long and 4 feet high on the north end of Key Largo, near the Anglers Club. Goggin never visited the site to confirm this report, and the exact location of this reported mound is not known. No further work has ever been completed concerning this site.
Figure 5. Current state of 8MO27, the Key Largo 3 rock mound. Photograph taken by the author on June 4, 2003, facing north.

Between the Key Largo rock mounds and Indian Key lie 8MO20 and 8MO21, Plantation Key 1 and 2, respectively. Both of these rock mounds were visited briefly by Goggin in the summer of 1940 (Goggin 1944), and were recorded in the FMSF by him in 1951. Neither of these mounds has been the subject of further archaeological research to date. Plantation Key 1 (8MO20) is a low limestone rock ridge containing some coral sand, approximately 20 feet wide, 65 ft long, and 2.5 ft. high. A vague verbal description concerning this site was given by Goggin, and the exact location of this rock mound is unknown.
Plantation Key 2 (8MO21), is in a slightly irregular rectangular shape, 75 ft. wide, 107 ft. long, and 4 ft. high. This site differs in composition from Plantation Key 1 slightly, in that it contains more sand and Strombus shells in addition to the limestone rocks. The exact location of this rock mound is not known, as Goggin only gave a general vicinity location on his site file form.

The discovery and investigation into these culturally significant rock mounds is important, in that it shows that the Keys Indians were utilizing the materials available to them for construction purposes, much like the inhabitants of Indian Key did hundreds of years later. Furthermore, from the faunal remains and other cultural materials recovered from midden deposits associated with these rock mounds, it can be said that the Native American people who created these sites were much like the earliest European settlers and later, the wreckers who inhabited the Keys, in that they subsisted on fishing, hunting, and the collection of wild plants and animals, including sea turtles.

By 1718, the remnants of the south Florida natives, including the Calusa and Tequesta, had been resettled in the Keys, where they were used as fishing laborers by the Spanish. This continued until 1763, when the last of the Florida Indians were carried away to Cuba by the departing Spanish. The Indians who remained in southwest and south coastal Florida were from then on referred to as “Spanish Indians” (Newman and Tesar 1997:5).
**Spanish Exploration**

*Los Martires*, or “the martyrs,” as the Florida Keys were referred to by the Spanish, were claimed as part of Florida for Spain on April 3, 1513, by Juan Ponce de León, the former governor of San Juan (today Puerto Rico). Ponce gave his discovery the name *La Florida*, Spanish for “The Flowered One,” which may be a reference to the Easter season in which the claim was made (Fuson 2000; Milanich and Milbrath 1989). One major effect Spanish exploration had on Indian Key was the use of a new route to and from Spain that brought ships through the Bahama Channel and past the Florida Keys (Schene 1973). This passage exposed the area’s native inhabitants to the first real taste of what was to become a profitable wrecking business in Florida, a subject that will be discussed in detail later in this chapter. The goods taken from these ships aside, there are no known remnants or architectural remains from these early Spanish explorations on or around Indian Key.

**British/Spanish/American Control**

The first real influence on the architecture of the Keys began after the Treaty of Paris was signed in 1763, ending the Seven Years War, and beginning a period of British control over Florida. This document decreed that Spain exchange Florida for Havana, which the British had captured during the war. Soon after the British had taken over Florida, Bahamians of both native and English descent soon started settling into the Keys, partially encouraged by the takeover of the area, but also due to the economic depression the Bahamas had been under during the last two decades of the eighteenth century (White
and Smiley 1959; Schene 1973). Mostly fishers and turtlers, these immigrants were able to supplement their income with money derived from the salvage or “wrecking” business. Their new home was much like their old one, with dangerous reefs for ships to be stranded upon, and cargo to be saved. The British did little to control the wrecking vessels, as they were able to impose exorbitant court and colonial fees on the salvagers (Schene 1973). Although only a relatively small number of Bahamians settled in the Keys during this time period, they paved the way for a great many more, and for the ideas that would be brought about through the inventive style of architecture they would help create for the region.

After only twenty years of British rule, Florida was once again returned to Spain at the end of the Revolutionary War in 1783, and again Spain’s influence on the architecture of the Florida Keys was minimal. In fact, the impact Spain made on Florida as a whole was diminished, as the unrest and revolution in other Spanish colonies left Spain with little time or resources to deal with the peninsula (Gannon 1993; Tebeau 1971). The northern portion Florida remained the most densely populated, and grew even more so with American citizens entering the region under the noses of the powerless Spanish. The southern part of Florida remained somewhat untouched, but the Keys were subjected to an influx of unsavory characters, including smugglers, ex-slavers driven from the African coast by the British, and pirates. They worked out of stations from Cuba to Florida, preying on commercial vessels sailing through the Florida Straits (Schene 1973).
In an effort to combat these sinister acts, the United States Congress passed a law in 1819 outlawing piracy and initiating a patrol of the Caribbean by the armed forces. Commodore Oliver H. Perry and the West India Squadron were able to decrease dramatically the number of ships being attacked around the area of the Florida Keys. This encouraged a number of Americans to settle in the Keys, who soon after their arrival, began to construct dwellings and other structures related to their domestic or commercial endeavors.

Also during this period of Spanish control, Florida had been used as a battleground by both the British and the U.S. during the War of 1812 and the First Seminole War in 1818. During the later of the two hostilities, Andrew Jackson seized Spanish forts in Pensacola and Fort San Marcos de Apalachee, just south of Tallahassee. The Spanish government, realizing that they could no longer control the American invasion, signed the Adams-Onis treaty early in 1819. Through this treaty they ceded Florida to the United States in return for the U.S. government assuming over $5 million in debt Spain owed to American citizens (Gannon 1993). Because of governmental changes, Spain was unable to ratify the treaty until 1821, at which time Florida became the sole property of the United States.

When Andrew Jackson entered the territory of Florida as its first military governor, the land was divided into two counties. The eastern half was St. Johns, and the western part became Escambia. During this time, the majority of the population remained in the northern portions of the state and around the coasts. Soon the population in the Keys slowly began to grow, due in large part to the wrecking industry, an
occupation that had been a consistent source of income in this region for a great number of years, but which also became a great influence on the initial architectural styles of this area.

History of Indian Key

*Wrecking along the Florida Keys*

Indian Key would not have been what it once was or is today without wrecking. This one business was the influence for the majority of architectural remains and the general layout of the island. Small bands of Indians, most likely under the control of the Calusa, inhabited much of the Keys, and were the first groups to benefit from salvaged goods. Generally material was recovered by the natives in two ways: items would wash up on shore from wrecks farther out on the reefs, or the stranded vessel would be spotted while the Indians were hunting on the mainland or fishing along these same reefs. As was previously mentioned, a new route to and from Spain brought hundreds of ships directly past the Keys and their perilous reefs. According to Schene (1973), many wrecks during this period were due to unseaworthy vessels, a lack of adequate navigational skills and aids, and/or the absence of reliable information concerning the Florida Straits. After the wrecked goods were collected, they were most likely traded to other groups of Indians throughout the state. When Panfilo de Narváez brought an expedition to the Tampa Bay region in 1528, he noted that the Florida Indians in that area had Spanish goods, most likely from the Keys (Hodge 1907:21; Schene 1973:12).
Unfortunately, for the Spanish crews of these vessels, the Keys Indians were just as hospitable to castaways as the treacherous reefs surrounding their land. Hernando d’Escalante Fontaneda was one of these unfortunate souls. In 1549 at the age of 13, Fontaneda was captured along with several other shipmates, after the vessel in which they were traveling to Spain wrecked somewhere in the Keys. Escalante Fontaneda spent seventeen years under the control of the Florida natives, eventually ending up with the Calusas. In his memoirs (Escalante Fontaneda 1575), he describes how the Indians would dispatch of their captives after torturing, taunting and working them as they saw fit.

The population and power of the Calusa Indians and the groups of Keys Indians under their control was soon diminished not long after European arrival into the area. The vast majority of the Florida Indians that remained in the Keys were carried away by the Spanish when they departed Florida for Cuba in 1763.

The reason for this change in power was the Treaty of Paris, which, when signed in 1763 brought British rule and a number of black Bahamian immigrants to the Keys. Although many of the Bahamian settlers were fishers by trade, they were able to supplement their income through wrecking, as they were often the first to spot stranded ships from their fishing spots. The Bahamians wasted no time in setting up a full-fledged wrecking operation, sending salvaged goods to Nassau from various ports of rendezvous. These stations were located at Key Biscayne, Key Vacas, Key West, Big Pine Key, and Indian Key, spots selected because of their proximity to a good harbor, fresh water, and a dangerous reef. These keys served as meeting points only. There is no archaeological or
architectural evidence that suggest permanent structures or settlements were established on any other island, besides Key West, by the Bahamian wreckers (Dodd 1944, Schene 1973, Viele 2001).

Up until the 1820’s, the Bahamians still had a stronghold on the Florida Keys wrecking industry. That was until the rumors of wreckers getting rich off of reselling salvaged goods spread north, sending a flurry of people to the area, all lured by the ideas of quick profit and vast wealth. These American wreckers soon began to establish wrecking settlements in the Keys, at the same locations the Bahamians were using for their rendezvous place. The first and most important permanent settlement of this kind was Key West.

The claim to Key West was purchased by John Simenton, a northern businessman, in 1821 from Juan P. Salas, who was given a Spanish land grant for the area in 1815 (Wilkinson 2003b). Development of the area began a year later with the construction of storehouses and other buildings, establishing Key West as a lucrative port. The business was further enhanced by an Act of Congress passed on May 7, 1822, which established Key West as the designated collection district for Cape Sable to Charlotte Harbor. Later that same year, Key West was designated the port of entry for this new district, much closer than the only other alternative, St. Augustine (Hoffman 1982).

Just as soon as Key West began to prosper as a salvaging community, the American wreckers began to look for ways to get the Bahamians out of their territory and their business. One person who had a great deal to do with this idea was William Duval,
the first territorial governor of Florida. Duval thought it was wrong that salvaged goods collected from Florida waters were being sent to Nassau, and that the Bahamians did not restrict their income to wrecking, as they were quite involved in fishing and turtling as well. He claimed that in one year alone, the Bahamians harvested over $100,000 worth of turtles and fish out of Florida waters, which they then sold to Cuba. Duval thought that the profits coming from activities such as wrecking and fishing based out of the Florida Keys should go to the citizens of the territory, not to outside parties. The governor brought this claim to his legislative council, and in 1823 they appealed to the 17th Congress for the federal regulation of wrecking. The council argued that wrecking and fishing in the Keys was “in the hands of foreigners” (Hoffman 1982), and hinted at impropriety on the part of the Bahamians. When the federal government chose not to enact a law regulating wrecking, the territorial government passed their own law in July of 1823. This law resolved the matter of how to adjudicate wrecking claims, stating that all claims were to be brought before an American notary public or justice of the peace. This official would then convene a five-person jury, two of whom were selected by the owner or captain of the vessel, two selected by the salvors, and one selected by the magistrate himself (Collins 1971, Hoffman 1982, Wilkinson 2003c).

This law only partially solved the problem of wrecking in the Keys however, as the territorial government did not have the authority to prevent foreign vessels from entering their waters. The United States Congress finally acted on the matter in March of 1825, deeming it unlawful for property wrecked along the American coast to be landed anywhere but at a U. S. port of entry. Furthermore, all claims had to be adjudicated in an
American court. While solving the problem of the Bahamians, this created another problem for the American wreckers, as claims now had to be handled in front of a court, instead of the jury system set forth in their own territorial law (Schene 1973).

Congress officially nullified the territorial wrecking law in 1826, causing the wreckers of Key West to revert to a system of arbitration similar to the one previously supplied by the territorial wrecking law, until a Superior Court was established in 1828. This new court controlled the area south of Indian River and Charlotte Harbor, and had the power to grant and revoke wrecking licenses (Hoffman 1982).

The wrecking business flourished in the Keys until around the time of the Civil War, reaching a high point of 2.8 million dollars in 1855 (Starr 1972). Soon after, the construction of a number of lighthouses around the Florida Reef, as well as the development of steam navigation made passage through the Straits much easier and safer for large vessels.

**Pre-Housman Era**

Joseph Prince and Silas Fletcher became the first recorded white American settlers on Indian Key in April of 1824. They came to the key to open up a store for Fletcher’s employers, Snyder and Appleby (Wilkinson 2003f). Having knowledge of the wrecking business, Snyder and Appleby knew Indian Key would be an excellent spot for wreckers, as well as settlers and Indians living on the southern mainland to stop off and buy goods (Viele 1996, Wilkinson 2003b). It was not long until other wreckers and turtlers brought their families to Indian Key to live.
The store on Indian Key was turning a large profit, and had changed hands several times before being purchased by Thomas Gibson in 1828. During the time of his ownership, Gibson would make other improvements to the island, including the construction of a two-story hotel. Dr. Benjamin Strobel, a Key West physician, stopped by Indian Key in 1929 and described a “ballroom” on the island as “a kind of piazza, or outshot from the main building; it was neither lathed or plastered, but was well lit up” (Hammond 1969:80). As impressive as the buildings of Indian Key were to Strobel at the time, the island was about to undergo some major reconstruction from one man with a simple plan for his own greatness.

*Housman Period*

The story of how Jacob Housman came to reign over Indian Key begins around 1824, when the twenty-four year old entrepreneur, who was captaining a freight schooner up and down the Hudson River, heard tales of the riches readily available in the West Indies. Housman soon stole the schooner from his father and headed south, where he hit a reef around the area of Key West hard enough to put his boat in for repairs. It was there that Housman got his first taste of the wrecking business.

Soon after starting his wrecking career, Housman became disenchanted with the way the business was tightly controlled by the Key West merchants, as they owned all of the wharves, warehouses, ship repair shops, and many of the wrecking vessels. They, in turn, did not care for Jacob, and in 1825, accused Housman of robbing the French brig *Revenge*, while it was stranded on a reef. Housman was found not guilty, but was...
accused again in 1828 of trying to bribe the master of another ship so that he could
“salvage” some goods from it. After ruining his reputation in Key West, Housman
sought a place where he could be free from control, and abide by his own rules (Viele
2001). At the time, Indian Key was a popular rendezvous spot for wreckers, which is
how Housman most likely came to know about its existence.

Housman moved to Indian Key in 1830, and soon after began an effort to acquire
pieces of the island. He bought a store and a two-story building containing a billiard
table and ninepin alley from Thomas Gibson in 1831 (Schene 1976, Viele 2001).

It was not too long after this that the island got its most famous visitor. In late
April, 1832, John James Audubon arrived at Indian Key. He sketched five plates of The
Birds of America (Audubon 1859) during his time on and around Indian Key, including
Plate CCLII, of the Double-crested Cormorant, a subspecies discovered by Audubon
during this trip. Audubon noted in his journal that he received the “full benefits of
Housman’s hospitality” (Proby 1974: 39) while on the island, and was excited about
exploring the many unchartered channels in the area. Much of the hospitality afforded
Audubon undoubtedly came from the slaves Housman had brought with him to the
island.

There were considerable drawbacks to living on Indian Key, but capital
improvements were made, utilizing the materials and ideas available to the inhabitants of
the island. Housman, with the profits he garnered from his store, built wharves, a
warehouse, houses, and blacksmith, carpenter, and sailmaker shops within a grid system
containing a number of streets and a town square. There was a need for all of these
amenities, because, of the twenty wrecking vessels listed as being employed on the Florida reefs in 1835, four listed their home port as Indian Key (Hudson 1943). Indian Key was becoming a thriving community, and both individuals and families were moving to the island, which was fast becoming one of the largest communities around that area.

In 1835, Housman submitted a petition to the Territorial Legislative Council asking that Monroe County be split into two separate counties. This petition was granted, and as a result, Dade County, which included all of the middle and upper Keys as well as a large section of the mainland, was created. Indian Key was named the temporary county seat, (Viele 2001). Housman saw this as an opportunity not to be wasted, and set about creating a government that would better serve his needs and desires.

After building a new courthouse, Housman saw to it that many of his employees and friends held posts in the Dade County government. Thomas Jefferson Smith, Housman’s attorney, was appointed county judge; Lemuel Otis, employed by Housman as an arbitrator, was justice of the peace, and then sheriff. Even James Dutcher, the marble cutter from New York, served as a justice of the peace during his time on the island. While Housman’s political power and influence were growing, his financial standing was diminishing.

Business for Housman’s store dropped dramatically late in 1835 when serious conflicts with the Seminole Indians forced a number of settlers to begin to leave the area. In 1838, Housman’s wrecking license was revoked for stealing goods from the wrecked ship Ajax in 1836 (Viele 2001), and he was forced to rely more heavily on his diminishing store income than before. Housman’s finances were further strained after the
start of the Second Seminole War in 1836, when he spent a large amount of money on armaments, provisions, and salaries for the band of twenty-four men that made up Company B, 10th Regiment of the Florida Militia, created to defend Indian Key against Indian attacks (Housman n.d.). By March of 1840 Housman’s savings and credit had been depleted, and he was forced to mortgage Indian Key and all its buildings, estimated to be worth $144,000, to two Charleston businessmen for $14,283 (Viele 2001).

Searching for any means to recoup some of his losses, Housman sent a proposal to the governor and Legislative Council of Florida as well as the president and Congress of the United States in 1840 in which he offered to “catch or kill all the Indians of South Florida for two hundred dollars each” (Viele 1996:52). Although Housman never received permission to do so, this offer was undoubtedly one of the reasons that Indian Key was the scene of a brutal attack early one morning that same summer.

The events of August 7, 1840, in which Indian Key was attacked by Spanish Indians who burned buildings and killed a number of residents, have been recounted numerous times (Beare 1961; Brookfield and Griswold 1985; Eyster and Brown 1976; Schene 1973), and will therefore not be discussed. The effect this tragic event had on the architecture of Indian Key will be examined in Chapter Four of this thesis.

The postmaster and customs inspector Charles Howe, his family, and Henry Goodyear, former operator of the grog shop on the wharf, were the only residents who returned to Indian Key for any extended period of time after the devastation of the island (Howe 1941). In a letter written from Indian Key three months after the August 7th attack, Howe tells his brother William that:
Captain Housman has cleared out for good – took everything he had left to Key West ... to sell at Auction – his Negroes – Boats – vessels ...he is a good deal in debt and it was thought that before the invasion, that he could not stand it more than a year or two longer – had mortgaged all his property on this island, to two different persons in Charleston (Howe 1941:197-8).

Housman was not in Key West very long before tragedy struck. In May of 1841 he was crushed between two ships when he tried to get from one vessel to another. His remains were returned to Indian Key, and placed near the ruins of his former mansion (Brookfield and Griswold 1985).

Naval Occupation

Four days after the destruction of Indian Key, the island was ceded “except a small portion of it, for [Housman’s] store and dwelling” (McLaughlin 1844) to the United States, and quickly taken over by the Florida Squadron of the Navy, also referred to as the “Mosquito Fleet.” For a period of approximately two years, these men, first under the command of Commander Isaac Mayo, and then Lt. John T. McLaughlin, would make Indian Key their base camp. While the total number of men enlisted in the Mosquito Fleet has been estimated at over 600 (Buker 1980), it is presumed that the majority of them remained out on patrol, returning to Indian Key only for supplies and medical treatment. Therefore, it is difficult to determine the exact number of men living on Indian Key during the period of Naval occupation.

The Second Seminole War ended early in 1842, and the Secretary of the Navy, A.P. Upshur, sent orders to disband the Florida Squadron on May 5th of that year
After almost four years of patrolling the waters of south Florida, the “swamp sailors” were going home.

Post-Naval Occupation

After the Housman period on Indian Key, occupation of the island for both commercial and domestic use seems to be somewhat sporadic and short-lived. According to Viele (1996), the two families that remained on Indian Key after the attack in 1840 (presumably the Goodyears and Howes), left the island when the naval forces withdrew two years later.

Indian Key was utilized as a construction site for both the Carysfort Reef Lighthouse in 1852 and the Alligator Reef Lighthouse in 1872. A few changes were made to the landscape of the island during both of these tenures, which will be discussed in Chapter Four.

Sometime between 1850 and 1856 William H. Bethel, a second-generation Bahamian wrecking captain, moved his family to Indian Key. From there, he continued his wrecking operations, captaining a number of vessels from the time of his arrival, until his death, sometime after 1880. Viele (2001:84) states that there were “a number of houses on the key” when Bethel moved there, but that there was “only one other man besides Bethel to defend the place from attack”. The 1870 census records a population of 47 people on Indian Key, approximately half of whom were from the Pinder family, who, like Bethel, were originally from the Bahamas (Jutro 1975, Wilkinson 2003d). Further
mention is made of small band of Army personnel sent to Indian Key to defend it, but no further mention of any architectural features is made.

From around 1870 to the early 1900s, Indian Key was used for agricultural and construction purposes. The above-mentioned Pinders, including father Richard, wife Caroline, and their two sons, Adolphus and Cephus, moved to Indian Key from Key West in the late 1860s, and helped in the construction of the Alligator Reef Lighthouse before finally moving to Upper Matecumbe in the early 1880s (Beare 1961).

Documentary evidence exists that show that at least two 12-ton vessels were built on Indian Key for use in and around Key West between 1872 and 1873 (Maloney 1876). Two years later Frederic Trench Townsend (1875) visits the island and describes it as being:

inhabited by a half a dozen families who have been compelled to take to sponging, since the erection of the light-houses and beacons on the reef ... [Indian Key] contains exactly five houses, six palm trees and one dozen plants of sisal hemp.

The documented history of Indian Key from this point on gradually diminishes until Henry Flagler started building his East Coast Railroad in the early 1900s. After purchasing the island, Flagler used the wharf for unknown reasons, and tried unsuccessfully to drill for fresh water (Wilkinson 2003g). Three years after the State purchased the land in 1970, research on the history and archaeology of the island began, as part of the comprehensive plan for the newly named Indian Key State Historic Site (now the Indian Key Historic State Park).
Chapter Three: Archaeological Investigations

Previous Archaeological Investigations

Irving Eyster

In the spring of 1965, Irving Eyster, a long time resident of the Keys and amateur archaeologist, was notified that a group of people were hunting for artifacts on Indian Key, using fire hoses attached to a gasoline pump to wash away the soil (Eyster 1982). This prompted Eyster to start an excavation on the island himself, and he looked for an area that “had not been vandalized several times” (Eyster 1965:1). He chose the foundation later entitled Feature F by Baker (1973), located in the north-central portion of the key. Eyster mainly recovered ceramics, square nails, and glass shards from the ten units he excavated, which he then used to make broad inferences about the people who had previously inhabited the structure. Besides concluding that all of the artifacts he found dated only to the Housman period of occupation, Eyster also implied that the presence of pipe stems, a chisel, gun flints, and musket balls meant that a man had inhabited the foundation and associated dwelling, while a “ladies” comb, perfume bottles, and “fancy” buttons indicated a woman (Eyster 1965). Eyster never took into account that the island had been through many periods of occupation, or that men and women often use the same items.
Henry Baker

Henry Baker was given the task in 1972 by the Bureau of Historic Sites and Properties to complete an initial archaeological study of Indian Key that would accompany the history of the island being compiled by Michael Schene (1973). Goals of this project included the drawing of a topographical map and completing a systematic archaeological survey of the island in order to identify all possible historically significant structures.

Baker (1973) identified twenty-two archaeological features during his initial study of Indian Key for the Florida Department of State (Figure 6). Features were defined as being any obvious architectural structures as well as concentrations of artifacts that may indicate the former presence of a structure. These features, identified alphabetically by Baker, have been the basis for all continuing investigations at Indian Key, as well as this thesis.

A short description of each feature, as well as Baker’s (1973) interpretation of the function of each structural remain or artifact concentration will be given in this chapter, followed by and a more in-depth analysis of a few select features in Chapters Four and Five.
Figure 6. Baker’s 1973 map of Indian Key showing the locations of features discussed in his report.
Features A and C are two parts to the same structure, and will therefore be discussed together. Feature A is the southern half of the foundation identified as Jacob Housman’s warehouse. Together with Feature C, the northern portion, this foundation is by far the largest architectural structure on the island. Measuring approximately 14.5 meters (m) north-south and 20 m east-west, the warehouse lies just southwest of the east coast of the island, close to the shore, and to one of the docks seen on the Perrine (1885) and Howe (1840) maps.

Feature A has been constructed out of the coral rock base of Indian Key, with a level bedrock floor, and walls made out of coral blocks that may have been quarried from its interior. There is a small tidal pool in the southwest corner of Feature A, which Baker (1973) thinks may have been enclosed at one time due to the fact that the bedrock opening around the pool is higher in elevation than the remainder of the floor. An iron stove recovered during the initial investigation of this feature lends support to the notion that the warehouse was re-used after the Housman period.

Separated from Feature A by a coursed coral block wall, Feature C has a unique floor construction that will be discussed later in greater detail. Instead of the plaster being applied directly to the bedrock, as was the case in Feature A, the floor of C consists of multi-layered masonry. Plaster was applied to the smooth bedrock, and then a brick floor was laid down, with a final layer of plaster over the top (Figure 7). There is a second, and in some areas a third layer of plaster applied to the floor that also extends up onto the walls. This layer, when completely intact, would have created a seamless plaster finish (Figure 8). A course of irregularly laid bricks was also noted along the walls of
this feature. Baker (1973) suggests these bricks may have been supports for a raised wooden floor during one of the later occupations of the site. He does not give any further details about the function of C, but believes that Feature A was a cistern.

Figure 7. Floor of Feature C, showing plaster over bedrock, then layer of brick with some plaster remnants on top of the brick. Photograph taken by Dr. Brent Weisman, May 15, 2000, facing southeast.

Feature B is a 6-x-3.5-m structure that has been identified as Senator English’s house or kitchen because of its location and designation on the Perrine (1885) map. This structure was completely excavated by Baker (1973), who thought that the feature represented the kitchen portion of the Senator’s home, instead of the dwelling, because of its small size. This architectural feature has a plastered brick floor with three distinct layers in some areas, much like the floor found in Feature C. Furthermore, the floor of
this feature is sloped toward the southeast corner, where a horseshoe-shaped plastered brick basin is mortared.

Figure 8. Plastered limestone wall in south corner of Feature C. Photograph taken by the author on June 6, 2003, facing south.

Features D and E are both large circular cisterns located near the center of Indian Key, northwest of Features A/C (Figure 9). Both are constructed out of brick and have plastered walls measuring approximately 62 cm thick and 1.4 m high. Feature E is slightly larger than D, and is approximately 8 m in diameter. The brick floor and walls of Feature D have been damaged by dynamite at some point by vandals, and had previously been reinforced with heavy iron straps recovered during the 1973 investigation.

The interior of Feature E contains a circular brick pillar that may have (as Baker [1973] speculated) served as the support column of a roof when first constructed (Figure
Neither of these cisterns appears on either one of the historic maps (Howe 1840, Perrine 1885), but a number of other buildings are shown in their place. Four houses with outbuildings (N, O, P, P on the Perrine 1885 map) are mapped in the general location of these cisterns.

Figure 9. Photograph of Feature D, in foreground, and Feature E, taken by the author, looking south from the observation deck in the northeast corner of Indian Key on June 6, 2003.

Features F and G are two structural remains related to the four houses with outbuildings noted on Perrine’s (1885) map, and lie just to the west of Features D and E. Baker writes that Feature F is the cistern portion of the house and kitchen complex owned by Mrs. Smith and Mrs. Sturdy, while Feature G was a vacant cottage and kitchen, probably belonging to Housman.
Both of these features are approximately 5.5-x-3 m in length and width, and have mortared stone walls and plastered walls and floors (Figure 11). Unlike the previous cistern remains of Feature B, Baker suggests that both F and G had a frame “living floor” above the cistern, which may have been larger than the stone foundation underneath it. Furthermore, concerning the location of the other six buildings seen on the Perrine and Howe maps adjacent to Features F and G, Baker (1973) thinks that these other structures were made entirely of wood, and as they lacked the sturdier cisterns that F and G had, they were destroyed after the 1840 fire, or possibly just swept out to sea by storm wash. None of the foundations of the six missing structures have been located as of this date.
Figure 11. Feature F after two seasons of USF excavation and with conservation treatment in place. Photograph taken by the author on June 6, 2003, facing north.

Feature H is a circular brick cistern slightly less than 5 m in diameter, located near the center of the island, just west of Features F and G (Figure 12). Baker (1973) believes that Feature H was constructed during or just after the Housman period on Indian Key, and may have been associated with the previously discussed missing structures once associated with Features F and G.

Feature I is a square masonry foundation with a plastered bedrock floor. The walls are approximately 4.5 m in length and 40 cm thick. The location of this feature (on the west side of the island, southwest of Feature H), places this near the “Tropical Hotel” location on the historic nineteenth century maps (Howe 1840, Perrine 1885). The
construction of this feature leads to its description as a cistern associated with the hotel in Baker’s report.

![Figure 12](image.jpg)

**Figure 12.** Photograph of Feature H, taken by the author on June 6, 2003, facing west.

Jacob Housman’s Tomb is what Baker (1973) has designated as Feature J. The tomb is an elongated hole cut into the bedrock near the eastern shore of Indian Key. Housman’s remains were returned to Indian Key after his death in 1841, but they are not in the tomb today, and their whereabouts are unknown. A marble marker was placed on top of his tomb, but was subsequently vandalized and badly damaged. A replacement tombstone was furnished by the Historic Florida Preservation Board in 1986 (Eyster and Eyster 1997), and still lies in place.
Feature K is a poorly defined area of artifacts and building rubble located approximately 20 m north of Features A and C. Artifacts collected from the surface could not give a definitive date to this particular occurrence, but it was dated to the mid-to late-nineteenth century by Baker (1973).

Oriented in a northwest-southeast grid pattern like the rest of the buildings built during Housman’s reign of Indian Key, Feature L is a stone masonry foundation of at least two components (Figure 13). Although this feature does not appear in its present location in the upper northwest section of the island on Howe’s (1840) map, it is theorized (Baker 1973) that it was omitted or inaccurately placed when this map was made. One segment of the structure is a roughly 3-x-3 m square, whose interior was filled with brick and large stones up to 2m high (the height of the foundation) at the time of Baker’s (1973) investigation. The second segment of this feature consists of an attached wall that comes out from the southeast side, indicating that there was another room built onto this structure at one point.

Like Feature C, there is a low sill of brick and masonry that comes out of the southeast corner, perhaps as a support for a wooden floor. This feature is commonly referred to in modern documents discussing Indian Key as the “Post Office,” although there is no clear indication that this structure was ever used for this purpose.
Feature M is the ruined foundation and walls of a roughly square structure measuring approximately 3 m on each side (Figure 14). Located in the upper north-central portion of the island, this feature consists of plastered stone masonry walls with an average thickness of 50 cm, and an estimated height of over 2 m. Baker (1973) describes this structure as a cistern with an unusual form of construction. In his report, Baker states that the walls of Feature M were “poured into frames similar to the manner tabby was poured … in this case, however, large stones and bricks were included in a clay like mortar matrix” (1973:25). An irregularly shaped plaster floor was discovered extending outward from the northeast wall during this early investigation, which was reported (Baker 1973) as being from a utilitarian frame structure that was attached to the

Figure 13. Photograph of Feature L, taken by the author on June 6, 2003, facing north.
cistern. Artifacts found under this floor by Baker (1973) consisted of Glades Plain prehistoric pottery sherds, while artifacts recovered above this plaster floor date to the early nineteenth century. These findings further help in dating this structure to the Housman period.

Feature N is the sole architectural feature located in the lower half of Indian Key. It consists of a circular stone cistern approximately 5 m in diameter with plastered interior and exterior walls of an average of 50 cm in thickness. Baker (1973) found that this cistern had been dynamited at some point, because large sections of it lay several meters from its original location. This is the only feature that is located near the area of the Glass and Beiglet cottages, as they were drawn on the Howe (1840) map.

Figure 14. Photograph of Feature M, taken by the author on June 6, 2003, facing northwest.
Feature O is a poorly defined artifact concentration located in the northwest quarter of the island, west of Feature H. Due to its location and the types of artifacts recovered during his excavations, Baker (1973) believes this feature is associated, like Feature I, with the Tropical Hotel. Indications that a frame building of undetermined size was also constructed at this site were also uncovered during this early investigation.

Feature P is another poorly defined artifact concentration in the northwest quarter of Indian Key. Located between Features L and H, Feature P consists of a moderately dense scatter of bricks and artifacts. Baker attempted no excavations in the area of this feature during the fieldwork portion of his 1973 report.

Feature Q is another ill-defined brick and masonry concentration located in the northwest quarter of the island, halfway between Features L and M. While excavating this feature, Baker (1973) found a large concentration of cow bones, clam and conch shells. These preliminary findings suggest that this area was used as a kitchen, but further investigation of the area was suggested (Baker 1973).

Feature R is located near the center of Indian Key (the highest point on the island), and consists of an artifact concentration containing fragments of cut granite block and brick. Baker’s (1973) excavations uncovered five artificially made cuts in the underlying bedrock, the positioning of which, along with the associated artifacts, suggested two distinct periods of occupation at this particular area. Furthermore, it is believed that Feature R may be the remains of a building constructed by Lt. McLaughlin during the period of Navy occupation between 1840 and 1842, as there is no record of a structure being in this location during the Housman period. The items recovered from
this feature, including two human teeth and an impact-flattened lead shot, lend themselves to this idea (Baker 1973).

Feature S is made up of two grooves in the bedrock on the northeast coast of Indian Key. This is near the location of a dock/wharf on the Howe (1840) map, and most likely consists, as Baker (1973) thinks, as beam support for the construction of the dock. The nature of this feature makes further dating nearly impossible.

Feature T is a portion of dry laid stone wall believed to be part of Jacob Housman's mansion. The location of this feature matches the location of Housman’s home on the 1840 Howe map, and a heavy concentration of early 19th century artifacts were recovered during Baker’s (1973) excavation. Artificial cuts in the coral bedrock were also discovered by Baker, who thought that some of the cuts were post-holes used in the construction of the six outbuildings associated with the Housman mansion (Figure 15). Feature T is located near the eastern shore in the northeast quarter of Indian Key. The entire area around this feature has been severely disturbed by storm wash, and the feature itself has been subjected to intense looting.

Feature U is the remains of a small cottage, located just west of Feature B, near the center of the island. Baker (1973) believed this to be the remains of a structure constructed during the 1940s, which was then destroyed by Hurricane Donna in 1960. This would represent a continuous cycle that occurs on Indian Key: a structure is built, a storm of some magnitude hits the island, the structure is badly deteriorated or washed-away altogether, the structure is then rebuilt or a new structure is constructed in its place. This idea of re-use and construction will be addressed again in Chapter Five.
Figure 15. Photograph of cut in the bedrock near Feature T. Taken by the author on June 6, 2003, facing south.

Feature V is the last feature identified by Baker in his 1973 report, and consists of a large area of artifact scatter near the northeast corner of Indian Key, once the location of Dr. Henry Perrine’s home. All structural evidence of the house itself, which was extended out into the water to the east of this feature, is gone. Left in its place however is a mass of household artifacts including coal, ceramic sherds bearing evidence of burning, melted glass bottle fragments, and charcoal. Also found within the confines of this feature by Baker (1973), were a Glades Plain sherd, a chert scraper, and three fragments of conch shell tools, all evidence of an earlier prehistoric occupation of Indian Key.
In August of 1979 the Division of Archives, History and Records Management conducted test excavations at the site of the (then proposed) observation tower (Baker 1982). An area near the intersection of Fourth and North West streets was chosen for the tower. The following year, excavations conducted by the state focused on relocating cottage and street locations in order to reestablish the street grid seen on the Howe (1840) map. By the fall of 1981, portions of the island were cleared so that a trail system corresponding to this grid could be created.

**USF Archaeology**

No further archaeological research was conducted on the island until 1998, when the University of South Florida (USF) spent a portion of their summer field school working on Feature A of the warehouse. The results of this stage of the fieldwork, as well as the 1999 investigation, which also focused primarily on the warehouse (Features A and C), are given in Lamb 1998 and Lamb 2000, both on file at the University of South Florida, Department of Anthropology, in Tampa.

Two separate stages of excavation on Indian Key were completed early in 2000. These investigations served as part of my internship, as well as the basis for this thesis. The objective of these investigations was to recover and document artifacts and architectural features in the area of the site undergoing or proposed for conservation, to provide new information for interpretive purposes about site areas previously neglected or incompletely understood, and develop a baseline map of Indian Key using GPS and
GIS technology (Weisman et al. 2001). Specific areas investigated and the types of methodologies employed during this project will be discussed later in this chapter.

In the summer of 2001, a team of graduate students led by Dr. Brent Weisman excavated six 2-x-2 m units, two 1-x-2 m units, and one 1-x-1.6 m unit, around the north, west, and east sides of Feature F. This was done in order to determine if there were any primary, undisturbed, or significant deposits of artifacts present in the feature, and if so, to what extent. Continuing work started the previous summer, when a GPS-based map and GIS predictive model of the island incorporating historical maps and Baker’s (1973) test locations and feature data was completed. Many of the data collected focused on the area around Fourth Street, and led to a thesis detailing this GIS-based approach to historical archaeology (Collins 2002).

The following summer, a crew from USF continued to focus on the area around Fourth Street, particularly Features F and G. Excavations along the south wall of Feature F were completed, and the north, west, and south walls of Feature G were excavated down to the bedrock. Special attention was given to the construction techniques employed in the building of these stone cisterns. This included the discovery of an iron spike driven into the bedrock in one corner of Feature F, suggesting that the foundations were carefully measured and staked out before construction began. Furthermore, it was theorized that after the stone slabs of bedrock were carved out of the ground, they were used as to form the walls of the cistern and the blocks were then shimmed in place by smaller rocks. Before they could be used though, the blocks had to be trimmed or smoothed, which was undoubtedly a strenuous task for the workers. This process was
most likely used for all of the cisterns located in the same general area as F and G, as well as for Features A, B, and C.

Also during this phase of the project, the USF team monitored the removal of soil from the interior of Features F and G by the Florida Park Service. Finally, a Cyrax laser-scanning unit was used to document site features and test the applicability of such an instrument for the purposes of archaeological research. (Weisman et al. 2002).

Internship

This thesis is based on research that began during an internship with the Florida Park Service in the spring and summer of 2000. For a six-month period, starting in March of that year, I focused on the Indian Key State Historic Site, investigating the archaeology of the island through research and excavation, under the direction of Dr. Brent R. Weisman. This investigation was funded through a contract between the Friends of Islamorada Area State Parks and the University of South Florida, which originated from a grant given to the Friends by the Florida Department of State with the assistance of the Historical Preservation Advisory Council. This project coincided with and complimented the work of the University of Pennsylvania’s historic preservation program, which was focusing on the architectural conservation and stabilization of the warehouse structure at the time. All of this work followed the guidelines and recommendations set forth in the Indian Key State Historic Structures Cyclical Maintenance Plan (DEP 1997) and the Condition Survey and Recommendations for the
Conservation and Management of Indian Key State Historic Site (Matero and Fong 1997).

My responsibilities included leading excavation teams, assisting in the mapping of both the site and specific test units by using both a transit and level as well as a Trimble GPS unit, washing, cataloging, and identifying all of the artifacts recovered during this phase of the research, acquiring historic documents and maps associated with the different periods of occupation of Indian Key, and contributing to reports written about this work.

Fieldwork and Methodology

Three separate areas, including the warehouse (Features A and C), Features F/G and Area Q, were the main focus of the fieldwork portion of this internship. All of these areas were subjected to the same thorough archaeological examination.

Work in the warehouse (Features A/C) was focused on the detailed mapping and photodocumentation of the walls and floors that make up this unique foundation. The entire area within these features had to be cleared of fill and debris prior to the University of Pennsylvania team covering them with geotextile to help in their conservation.

Much of what was believed from past research on the warehouse to be redeposited fill (Lamb 1998), was screened through ½-inch mesh by the FPS staff prior to our arrival to facilitate the movement of this large amount of soil. Detailed cleaning and sweeping of the floors was done prior to their being covered with geotextile. During this process, a small footprint impression was discovered in the southwest corner of Feature C.
(Figure 16). This footprint was in the top layer of plaster, and must have been made soon after the floor was finished.

A 1-x-2 m test unit was excavated in the area between Features F and G, and a single 50-x-50 cm shovel test was dug approximately 5 meters south of the south wall of Feature F. The purpose of these excavations was to see the amount and kind of artifacts deposited outside of these features, and to get a better look at the foundation wall construction of Feature G. By examining the types and percentages of artifacts found near a certain feature, the function, period and frequency of use can be further examined. There were many kitchen-related artifacts retrieved from these units, but more interestingly, a greater number of architectural artifacts were recovered here than from other areas of the island.

Three 1-x-2 m test units were excavated near the outside of the area previously identified by Baker (1973) as Feature Q, with the hope of finding artifacts related to the Howe household from the Housman period occupation of the site. Artifacts related to everyday activities, especially the preparation of food, were the most prevalent type recovered from these units.

All of the artifacts collected in the field were placed in bags with their specific provenience noted on them; they were further assigned F.S., or field specimen numbers, as a means of identification. A field bag list was created to keep track of the artifacts collected, before returning to Tampa.
Figure 16. Footprint impression in the floor of Feature C. Photograph taken by Dr. Brent Weisman on May 15, 2000, facing northwest.

Laboratory Methods

All of the artifacts recovered from the excavations at Indian Key during the span of this internship were brought back to the University of South Florida’s Archaeology Laboratory in Tampa. Depending on the material, each artifact was cleaned, either by gently washing in water (as is the case for glass and ceramics), or by gently scrubbing with a dry brush (for metal or faunal materials). After the artifacts had been cleaned, and allowed to dry if necessary, they were cataloged using Stanley South’s (1977) artifact group system, most commonly used for eighteenth century sites.

South (1977) divides all artifacts into eight major groups: the Activities Group (mostly tools associated with agriculture, fishing or woodworking activities to name a
few), the Architecture Group (nails, bricks, or mortar), the Arms Group (consisting mainly of gunflints and lead shot), the Clothing Group (most frequently buttons), the Furniture Group (household or commercial), the Kitchen Group (all ceramics and glass [excluding window]), the Personal Group (beads, coins, personal ornaments or jewelry), and the Tobacco Group (pipe bowls and stems). The exercise of placing these artifacts into groups serves as a means of quantifying the artifacts for later comparative analysis and further research.

As part of the cataloging process, all of the artifacts were weighed, counted, and further divided into provenience, class, and category, and described in detail after being individually examined. Although the artifacts collected and cataloged during this internship were not directly used in this thesis, information garnered from these artifacts has proved useful to a number of other Indian Key related research topics (Collins 2002, Weisman et al. 2001).

Documentary Research

A large portion of this internship was devoted to searching out documents pertaining to the history of Indian Key. Libraries and historical societies throughout the state of Florida were contacted and visited in an effort to photocopy and examine newspaper articles, letters, government documents and historical artifacts. These items were obtained from the Historical Museum of South Florida in Miami, the State Library of Florida in Tallahassee, Monroe County Library Branches in Islamorada and Key West, and the Hillsborough County Public Library in Tampa.
The National Archives of the Library of Congress were also searched. The Memorial of the Attorney of the Estate of Jacob Housman, Deceased, from the April 20, 1846, 29th Congress, 1st session, was acquired from the National Archives. Within this 200-page packet, were a number of handwritten documents, some illegible, dealing with many different aspects of Housman’s effect on Indian Key. Some of the most important, as related to this thesis, were the affidavit given by James Dutcher and his wife (Dutcher and Dutcher 1846) and Housman’s own petition to the Senate (Housman n.d.), both concerning the state of Indian Key before the attack of 1840.

Finally, many journals and books from libraries all over the country, regarding the history of Florida were scoured, looking for bits and pieces of information concerning any aspect of Indian Key. The majority of information used in this thesis pertaining to the structures of Indian Key came from these sources.
Chapter Four: Research Questions

Vernacular Architecture

One of the major questions concerning the architecture of Indian Key is whether or not it can be considered vernacular in nature. In short, vernacular architecture is one that typifies an area, that is usually the product of builders rather than architects, and based on their previous experience and available resources, not on style or academics (Metropolitan Dade County 1982). Given this definition, it is easy to call the architecture seen on Indian Key vernacular, as all of the original features, except those built specifically by the Navy, were most likely constructed without the help of professional architects, using resources available, with their placement and materials dictated by the island itself.

Vernacular architecture has been described as the “architecture of habit,” as it is the “result of familiarity … and oft-times unconscious preference for basic forms and layouts – that exist independently of passing taste” (Gamble 1990:25). The term was first used in the nineteenth century by architectural theorists to refer to traditional rural buildings of the preindustrial era (Upton 1985). Since that time, many articles and entire books (Glassie 2000) have been written about different aspects of vernacular architecture.
Architecture of Indian Key

To further examine what appears to be the vernacular architecture initially erected on Indian Key, it becomes important to ask why it ended up the way it did, and the reasons concerning the construction of the buildings on the island. In this section, the architectural elements used in the creation of the structures, the origins of these elements, and the theoretical reasons for their use will all be reviewed. But first, the layout of Indian Key will be discussed, with a focus on what seems to be the use of an established grid-system prior to construction.

When trying to answer the question of why Indian Key ended up the way it did architecturally, it is necessary to realize the large infrastructural investment Jacob Housman made in the island. Indian Key has no natural resources besides the limestone rock of which it is composed. There is no fresh water or wood for construction, and the nature of the soil does not allow for self-sufficient crops. To choose to live on Indian Key requires a serious commitment, and an enormous amount of work. For Jacob Housman it meant creating capital out of rock. To do this, Housman planned out the settlement of Indian Key following a grid pattern similar to those used in New England, complete with a town square.

In an attempt to understand the construction of Indian Key, it may be useful to approach it much like Anthony Garvan did with the city of Philadelphia (Garvan 1963). In his study, Garvan saw the city as a grid, constructed out of elements borrowed from many different sources, all coming together to promote specific economic, social, and political goals (Garvan 1963). Grids used as a system for constructing an inhabitable
space, have been utilized in North America since the time of European contact, but it was not until after 1787 that “they took on near-mystical qualities as models of urban form so near to divine wisdom that they would make believers out of atheists” (Brissot de Warville 1792:243). Dell Upton (1992) studied the way in which culture affected and was affected by the ways cities were built and the use of the grid system. He explains the role of this layout as such:

The grid was understood as a single-order spatial system that eradicated natural inequalities of topography by providing equal access to every location within it. It was nonhierarchical: the parts were clearly defined, but the connections among them were articulated and flexible, and could thus accommodate an unlimited number of separate networks of meaning and activity. The grid was conceived, therefore, as neutral among users, transparently depicting their relationships, and transparent, as well, in making social knowledge and spatial access available to everyone (Upton 1992:56).

The basic idea of a grid can be modified and transformed to meet the needs of a specific community, but at the same time provides the first step in maintaining order, as it can dictate the movements of its inhabitants. The way in which streets are laid out, the location of businesses, homes, and communal areas, and the distance that separates these areas are all important factors that shape both the geographic and cultural landscape of a town.

Grid systems were not just being utilized in the planning of New England cities. Through historic maps we know that a grid layout was being utilized for a portion of Key West as early as 1829, but most likely earlier (Figure 17) (Whitehead 1829).
Figure 17. Plat of Key West drawn by William Adee Whitehead in 1829.

This map shows that plots of land were dictated by the system of streets laid out in a northeast-southwest and northwest-southeast manner, as well as the need to place buildings along the waterfront of the port. The town at that time was limited to the northwest corner of the island, while the rest of the key was either divided into large plots or left untouched. There is also a town square, noted in the bottom left corner of the map as Jackson Square, which contained the courthouse and jail. To some extent it appears
that Indian Key is just a scaled-down version of Key West, as far as the layout is concerned. The planners of this city had to deal with many of the same issues as Housman did, including the topography and the necessity to receive goods from ships. It appears that the decision to use a grid system for Indian Key was influenced by the time Housman spent in Key West, as he could easily carry over many of the ideas to his own island.

When looking at the construction of the landscape of Indian Key, it is important to investigate not only the concrete or simplified reasons for construction (i.e. town square located near the center of a community), but also the motives that are not as easily recognizable today. Factors such as the sights, smells, and sounds of Indian Key would have played a large part in the construction of a town plan. The odor of rotting cargo or the noises associated with the unloading or loading of ships from the wharves are reasons for placement of buildings which are not immediately clear when standing among the ruins of the island today. Geography and the environmental setting must also be considered when discussing the layout of Indian Key. The deep water needed for the wharves decided their location, as well as the placement of the warehouse building. Salvaged items had to be taken off the ship, then moved from the wharf to be stored in the warehouse. The shortest route from ship to storage would be the most valuable, as many items were undoubtedly large and heavy. Furthermore, breezes coming off of the Atlantic would have been an important factor in considering the placement of houses, and areas void of overhanging vegetation would have been necessary to ensure a better quality of water from the associated cisterns. It was important to Jacob Housman that
Indian Key be appealing to visitors, inhabitants, and potential investors, as these were the people whose good faith and financial support would be needed to sustain the tiny island community. Laying the town out in a grid pattern imparted a sense of safety, order and organization, which would have been important in varying degrees to everyone.

The overall layout of the island suggests that there was an attempt to control to some extent the mingling between residents and those there on business. When the island is viewed from above, it is easier to see that the warehouse and related wharf are located in the southeast corner of the island, separated from the other commercial buildings and residences by the town square, which was most likely used for both commercial and residential activities, while the smaller, more resident-friendly businesses such as the carpenter, blacksmith, and island store are all located in between the homes of Housman, Howe, and Perrine, as well as being close to Housman’s private dock/wharf (Figure 18).

Documentary evidence supports this notion of an attempted separation of those living and working on the island. Hester Perrine Walker, in her account of the “Massacre of Indian Key” (Perrine Walker 1926), describes how her father, Dr. Henry Perrine, kept her and her sister Sarah close to their home, shutting them out “from all social life, with the exception of the family of Mr. Howe” (Perrine Walker 1926:20). The two sisters also watched suitors and other guests who came to see them “depart from behind our blinds” (Perrine Walker 1926:22), as they were not allowed to visit with them. Furthermore, the girls had little, if any interaction with the men and women who worked on the island or stopped there for supplies. The type of division seen on Indian Key does not only seem
Figure 18. Charles Howe’s 1840 map of Indian Key, with the residential/private areas and commercial areas highlighted.
to have been limited to simply gender separation though. A clear division based on class can be seen in the treatment that the Perrine girls received as compared to Mrs. Smith and Mrs. Sturdy, who, according to historic maps (Howe 1840; Perrine 1885) lived in the middle of the island, presumably alone, and surrounded by a number of men. It is interesting that ones’ social standing should play such an important part in the designed landscape of Indian Key, since Jacob Housman could have chosen to arrange the island so that all the residential and commercial areas were located away from one another. Instead, he chose to fall back into standard practices, treating those who are considered to be important or privileged, like the Perrine’s, different than the common islander.

A different type of separation on Indian Key can be seen in the way that the twenty-nine slaves that were in the employment of either Jacob Housman or Charles Howe in March of 1838 were treated (Wilkinson 2003f). All of these men and women were housed in one of the six small dwellings located behind either one of the main houses and kitchens, close to the white families, but still separate.

The “twenty or thirty small houses” (Davis 1943:58) built on Indian Key before the summer of 1840 consisted of three large houses for Housman, Howe, and Perrine, the warehouse complex, Senator English’s house and kitchen, the Tropical Hotel, blacksmith and carpenter’s shops, a store, and a number of cottages and cisterns located on the southern end and the north-central portions of the island.

The larger houses, including those of Housman, Howe, and Perrine, as well as the Tropical Hotel, were built to face the water, enjoying both the scenic views and the breeze. Housman chose to place his home close to the enclosed wharf on the east side of
the island, which also places him near the everyday occurrences and business of the warehouse and the store. The Howe and Perrine homes were both located near the northern end of the island, set away from the commercial buildings and visitors. Charles Howe owned not only a home, but, according to Perrine (1885), a kitchen, shop, cistern, and “Negro dwellings,” making his portion of the island into a compound. Both the blacksmith and carpenter’s shops were placed some distance away from any homes, but close to the store, on a small piece of the island that juts out in the northeast corner.

Foundation Remains on Indian Key

Housman’s ultimate goal was to make Indian Key both profitable and hospitable for its inhabitants, including himself. Unable to foresee what was to come in early August of 1840, Housman built the structures on Indian Key with the future in mind. Instead of building small shanties with no foundations, he opted for a much more expensive route, blasting large foundations out of limestone at a considerable cost in both time and money. He also spent some time planning the layout of the island, taking into account a large number of factors, including residential and commercial separation, social organization, and topography.

Documentary evidence concerning the structures on Indian Key was collected from a wide variety of documents with different levels of accuracy. Newspaper articles, military reports, first-hand accounts, general history books, and government documents were all examined for information regarding architectural changes during the different periods of occupation at Indian Key.
**Pre-Housman Period**

When Silas Fletcher and his family, along with Joseph Prince, settled on Indian Key in April of 1824, they constructed two buildings on the island, a store for selling goods for the firm of Snyder and Appleby, and a house for the Fletcher family. Four months after Fletcher and Prince bought out the stock to the store in January of 1825, Prince left the island, returning one year later to open up another store on Indian Key. Many turtlers and wreckers soon began inhabiting the island, and by 1829 a poll book has the population at over fifty (Schene 1976). A population increase such as this demands an increase in housing and other related structures. No information about the number or styles of the structures built, the materials used, or their exact location has been located as of this date.

**Housman Period**

Practically all of the historic documents relating to this period focus on the most notable occupants of the island (Housman, Howe, Perrine), and as a result, most of the discussion of structures and other architectural features is limited to these individuals. There is no mention of the houses the slaves occupied, or what type of “cottages” the carpenters Beiglet and Glass resided in. As a result, more inferences have to be made about the structures not mentioned in the historic record.

When Jacob Housman began buying property on Indian Key in 1831, his first purchase was a store and a two-story building containing a billiard table and ninepin alley (Schene 1976). This is the property that Housman would eventually turn into the
Tropical Hotel. By 1840, Housman’s Indian Key would contain “about 30 dwelling houses [and] two large store houses” (Housman n.d.).

James A. Dutcher, a marble cutter from New York City, testified in an affidavit given to the Marine Court of the City of New York in April of 1846, that he lived on Indian Key from 1837 to 1838 (Dutcher and Dutcher 1846). Dutcher was first brought to Indian Key to construct a “rectangular cistern that was excavated out of solid rock, and built at an expense of $4,000” (Dutcher and Dutcher 1846:1). This cistern is almost certainly Feature A, for it is one of only two large rectangular cisterns, and is the only one to have been clearly excavated by a professional. In the affidavit, Dutcher states that there were approximately 35 buildings on the island, and that Housman kept a great deal of valuable property in the storage buildings he owned. He also discusses the cisterns on the key, mentioning that there were several other cisterns, similar to the one he constructed, but smaller, and that they were the only water supply for the island and the Navy personnel stationed nearby (Dutcher and Dutcher 1846:1-2). These cisterns are most likely the ones associated with the cottages like Features F and G, as well as other smaller dwellings, such as Feature B.

Dutcher is featured again, although in a different capacity, in the history of Indian Key. During his stay on the island, Dutcher not only served in Housman’s militia, but also as a justice of the peace, joining other Housman employees and acquaintances who held positions of power in the newly formed Dade County. Dutcher and his fellow officials held their business in a new courthouse constructed by Housman “to enhance Indian Key’s claim to the county seat” (Schene 1976:10), sometime around 1835. This
courthouse does not appear on either the Howe (1840) or Perrine (1885) maps, and its location on the island remains unknown.

Henry E. Perrine, son of Dr. Henry Perrine, and survivor of the “massacre” in 1840, returned to Indian Key in 1876 (Viele 2001). Nine years later, prompted by his children and grandchildren, he wrote a book about his father and his family’s life at Indian Key. In this book, the younger Perrine recalls arriving at Indian Key by boat from Palmyra, New York, on Christmas Day in 1838. He describes a “large warehouse three stories in height, and crowned with a lofty cupola” (Perrine 1885:13), as being the most prominent object on the island. Perrine also mentions Housman, whom he called the “proprietor of nearly all the island and of the various cottages, ships, stores, hotel, and warehouse” (Perrine 1885:13), as well as his two-story mansion located near one of the three large wharves on the northeast side of the island.

When Henry E. Perrine first saw what was to be his family’s home, he described it as being a two and one-half story house with a cupola, and with a foundation that was extended out into the water. There were both upper and lower verandas on the side facing the sea, and a small wharf in front of it. There was a passageway that led from the house to the wharf, which had sides built out of rock and top made out of planks, giving it a solid appearance, even though it was hollow in the middle. The cellar inside this wharf became a bathing place in high tide, and was also used to stow a small boat during the beginning days of the Second Seminole War. The end of this enclosed space was used for a turtle crawl, for green and loggerhead turtles to be kept before they were slaughtered. Perrine drew a map to go along with his written descriptions (Figure 19),
which for the most part matches other maps of the island concerning that period in time (Howe 1840), as well as the documented archaeological features.

**Figure 19.** Map of Indian Key drawn by Henry E. Perrine (Perrine 1885).

No architectural remains of the Perrine house are known to exist today, and as a result, almost all of the information concerning this structure comes from historical documents such as Perrine’s (1885) account. There is one letter from Dr. Henry Perrine, written from Indian Key in 1840 to the *Magazine of Horticulture*, in which he discusses the arid climate of the island, and notes that he is sitting “in the cupola of [his] dwelling, which is erected over the sea” (Perrine 1840:51) while writing the letter. It is known, through the writings of the Perrine’s son Henry (Perrine 1885), that this cupola was only
accessible by a steep stairway that led to an entranceway that could be closed by a heavy trap door.

Perrine (1885) describes the rest of the house as such: the first floor of the house contained a parlor, dining room, pantry, washroom, closets, and a room referred to as the bathroom, because it had a trap door with steps that led down into the water below. The second floor consisted of four bedrooms and two other rooms, one of which was used as a library, and for a short period of time, also a schoolroom for Charles Howe’s children. Perrine (1885) also mentions that there was no plaster or lath in the house, because all of the walls and ceilings were lined with yellow pine. Although there are no photographs of the Perrine home, a watercolor of the structure by Millard Wells (2000) was inspired by a crude sketch in Brookfield and Griswold (1985), which was then added on to from the painter’s knowledge of Keys architecture and materials used around the same time period (Figure 20).

The events of August 7, 1840 have been discussed in great detail by a number of authors (Beare 1961; Brookfield and Griswold 1985; Eyster and Brown 1976; Schene 1973), and as a result, will not be discussed here, as the focus of this thesis is on the architecture of the island. After the Spanish Indian raid, according to Weidenbach (1995:81):

The lovely, thriving island had been wiped bare by the marauding Indians during the attack of Aug. 7, 1840. Nothing substantial remained except the homes of Senator English at one end of the island and Postmaster Howe at the other, plus the useable remnants of some of the wharves and storage facilities, the brick cisterns, and a makeshift grog shop.
In her text, it is not clear where Weidenbach got this specific information from, and the report that the remaining cisterns were brick is a claim not substantiated in other reports of the architecture from this period. In the footnotes section of her report, she says that portions of the data presented in the chapter that includes the above statement were based on House Report #582 (1844) and House Report #163 (1845). These documents were requested from the National Archives, and nowhere in them is the presence of brick cisterns substantiated.

Many different sources state that the one structure that was definitely not burned down that August night was the home of Charles Howe. (Dye 1974; Perrine Walker 1926; Wilkinson 2003a). According to some sources (Dye 1974), this home was the only building left standing, while other sources (Perrine Walker 1926, Wilkinson 2003a) state
that besides Howe’s home, two or three of the one-room slave dwellings, or Senator English’s home were also spared.

**Naval Occupation**

In 1844 a congressional committee was appointed to examine the various expenditures that had been accrued since the start of the Seminole Wars. When this Committee on Public Expenditures checked the accounts of three commanders of the Florida Squadron, C.R.P. Rodgers, John Rodgers, and John T. McLaughlin, they were shocked by the exorbitant amount of money they had spent. Even more perplexing to the committee was that out of the $343,937.76 total, Rodgers and Rodgers squadrons had only spent a combined $60,551.08. This meant that Lt. McLaughlin alone was responsible for over $283,000 in expenses charged to the U.S. government. Committee members went over every voucher accumulated by McLaughlin during a four-year span, looking for possible impropriety on the part of the lieutenant, and also the way in which goods were dispersed throughout the squadron (Viele 1999, Weidenbach 1995).

In response to the charges against him, Lt. McLaughlin (1844) wrote to the House of Representatives in an attempt to address these issues. One specific complaint the committee had involved the amount of money McLaughlin had spent constructing and repairing buildings on Indian Key. In his defense, McLaughlin states that “the number of houses erected on the Island, by the Squadron was twelve, including a boat shed, capable of stowing away 150 canoes” (1844:13-14). He goes on to say that only two of the houses were painted and none of them had any glass in their windows, because the paints,
oils and glass he charged to his account were all used in the maintenance of his ships.

Furthermore, when accounting for other building supplies, he states that lime and cement were used for a bake oven and cisterns “whence the Squadron obtained its supply of water in part” (McLaughlin 1844:14). McLaughlin (1844) does not mention the location of any of the structures or the bake oven, where the materials needed for the buildings came from, or the reuse of any of the foundation remains from the Housman occupation.

The examination into the spending habits of McLaughlin and the Florida Squadron was not the first time the lieutenant had to defend his actions on Indian Key. Lt. Robert Tansill was a Marine assigned to the Florida Squadron in the fall of 1841. Before he had even arrived in south Florida, Tansill made arrangements with the editor of the *St. Augustine News* to keep him informed of any interesting developments he came across during his new assignment. Tansill compiled lists of offenses he saw in a little black notebook, and reported to the *News* under the codename “OPQ” (Weidenbach 1995:34).

Besides writing to the paper, Tansill was also complaining about the Squadron and the treatment of the men within it to the Secretary of the Navy. In May of 1842, the Secretary received a letter from Lt. Tansill stating:

> *Lieut John T. McLaughlin has erected a house on Indian Key E.F. at the public expense, which is supposed to have cost some thousand dollars. It is enclosed with extensive palings, and completed suitable for a dwelling house, with a kitchen and other necessary outhouses for his accommodation, and is now occupied as such by Lieut McLaughlin’s family, to which I respectfully solicit your attention, and hope the Department will see cause to order a Court of Enquiry on the subject...*(Weidenbach 1995:40).
The matter was left alone until after the end of the Second Seminole War. McLaughlin was then requested by Secretary Upshur to press charges again Tansill for “treating with contempt his superior officer” and “conduct unbecoming an officer” (Weidenbach 1995:43), as a result of his letter writing. McLaughlin himself would not be charged by the Navy with any crime.

The court-martial of Lt. Tansill began in Philadelphia in January of 1843. Included in the documents associated with the trial of Lt. Tansill are a few details concerning the architecture of Indian Key. With regards to the house mentioned in Tansill’s letter, members of the Florida Squadron testified that the house was built to furnish housing for the officers and the Squadron commander, but also contained the company office and emergency hospital space. The building was a two-story frame house, approximately 28 feet square that was enclosed with a fence to keep cattle out. This fence was “made by the carpenter from the refuse planks of a marine barracks that had just been built” (Weidenbach 1995:50).

Also contained in the court-martial documents was an account of the state of Indian Key in 1840 when Naval Surgeon John Hastings arrived on the island. He describes a building “roofed over, without sides …used partly as a barracks, workshop, and hospital” (Weidenbach 1995:82), which could have been the warehouse. The uninhabitable condition of Indian Key when the Navy took it over is undeniable, making the construction of the buildings by McLaughlin absolutely necessary. No known maps or photographs taken during their period of occupation exist, and the exact locations and appearances of these structures remains unknown.
Post-Naval Occupation

In 1847 the construction of a lighthouse for Carysfort Reef was authorized, but the choice of a design was delayed until after the creation of the United States Lighthouse Board in 1852. A revolutionary iron screwpile design was chosen, and a foundry in Philadelphia cast and assembled the iron skeletal structure to check for specifications. The tower was then dismantled and shipped to Indian Key, which had been chosen as the designated depot and construction site (Dean 1982). Although nearly thirty miles from Carysfort Reef, Indian Key was the choice of Brevet Major Thomas B. Linnard, the topographical engineer assigned to the Carysfort Reef Lighthouse. In a letter to the Topographical Engineering Corps dated November 22, 1850, Linnard defends his selection of Indian Key by stating that “it is the only place nearer than Key West, where good water can be procured, a channel deep enough for our vessels passes close to it and it is easily approached from sea” (Linnard 1850:1).

Linnard also wrote back to Washington about the recent occupation of the island by Lt. McLaughlin and the Florida Squadron. He notes that during the Navy’s reign:

A number of good buildings were erected, consisting of a hospital and several houses for officers quarters. These buildings are still in a fair state of preservation, having been repaired from time to time by the present occupant of the island. He is the agent of a house in Charleston, who claim the Key under a mortgage from Housman. He carries on a small traffic with the wreckers in provisions, water, and whiskey (Linnard 1850:1).

Through this one letter, it is known that the builders of the Carysfort Reef Lighthouse utilized buildings on Indian Key that had been constructed approximately ten
years earlier by Lt. McLaughlin, and that a representative of Smith Mowry, Jr. of Charleston was present on the island, perhaps to protect the claim of his employer.

Preparations to construct the Alligator Reef Lighthouse, which was to be located near the site of the wrecked schooner *USS Alligator*, began in 1871 (McCarthy and Trotter 1990). Indian Key, located four miles away from the proposed location of the lighthouse, was chosen as the construction site for this 150-foot light, as it was the nearest body of land. The lighthouse parts were to be manufactured by Paulding Kemble of Cold Spring, New York, and shipped down to Indian Key for final assembly (Dean 1982). An 1872 report from Congress mentions that construction completed on the island prior to the shipment of the lighthouse materials included “a building for quarters for mechanics and laborers, with a capacious cistern, and ample storage room in the cellar, and a smithery and large shed for the iron work and other material for the lighthouse” (U.S. Government Records 1872:1). A “fuel-wharf” (U.S. Government Records 1872:1) had also been built, for storage of coal for the tender. One can assume that the mechanics housing building with a cistern and storage in the cellar was the re-use of the warehouse complex, Features A/C. One side may have been used as a cistern, one side as storage, and a dwelling constructed on top of it.

Architectural Elements

After examining the features that remain on Indian Key, some interesting architectural elements present themselves. The use of Key Largo Limestone for foundation material can be logically explained by the lack of soil and the presence of
rock on Indian Key. The ways in which this stone was used, though, indicate some forethought and some instances of trial and error. Key Largo Limestone is an extremely porous material (DEP 2000a), a fact undoubtedly learned during the construction phase on the island. Unable to rely solely on the bedrock for cistern use, it became necessary to cover the floors and walls with plaster, and in some cases to cover brick with one or more coats of plaster as well.

**Bricks**

Bricks are an important piece of the archaeological and architectural history of Indian Key. The investigation of bricks included in this thesis is just a cursory one, intended to look at some possible origins as well as explain some of their common traits.

Bricks have been around for more than 10,000 years, as evidence of their manufacture was found in the Pre-Pottery Neolithic A and B levels of Jericho, Israel. The craft of brickmaking was later spread by the Romans throughout Europe and Britain during the time of their empire. The first bricks arrived in America sometime in the late eighteenth century aboard a ship, as it was common to use them as ballast. It is not clear when bricks were first produced in the United States, or by whom, but it is safe to say that the industry caught on quickly, and brick manufacturers spread across the country (Gurke 1987).

The types of bricks most often utilized in structures include common, face, fire, clinker, pressed, and glazed. The three bricks archaeologists are most likely to come in contact with are common, face, and fire bricks. Common bricks are the most often used
type of bricks. They are made of ordinary clays or shales in kilns, and usually receive little or no special attention from the manufacturer, meaning they do not have any special scoring or markings and were not produced in any special color or surface texture (Brownstone 1984). Common bricks are generally used for backing courses in solid or cavity brick walls, and are almost always reddish-brown in color. Some of the color differences in bricks are a result of the inclusion of iron oxides, silicates of lime, carbonates of lime, magnesia, alumia oxides, or alkalies in the clay blends (Gurke 1987; Integrated Publishing 2003; Kelly and Kelly 1977).

Face bricks are used in the exposed face of a wall, have better durability and appearance, and are of a higher quality than common bricks. The most common colors in this type of brick are various shades of brown, red, gray, yellow, and white (Integrated Publishing 2003; Kelly and Kelly 1977).

Fire bricks are more expensive than either common or face bricks. They are used mostly in areas of extreme heat, such as fireplaces or ovens, but have also been employed as building bricks. Because these bricks must be able to withstand extreme conditions, they are produced from special clays called fire clays, which have a greater resistance to heat. The most common size of fire bricks is the “standard 9 in. straight” (Gurke 1987:99), which is slightly larger than both common and face bricks in all dimensions. These bricks usually come in shades of light yellow or cream (Gurke 1987; Kelly and Kelly 1977).
Clinker bricks are bricks that have been overburned in the kilns, resulting in a hard and durable brick that may be irregular in shape. Pressed bricks are made by the dry press process, and are usually used as face brick. These bricks have regular smooth faces, sharp edges, and perfectly squared corners. Glazed bricks have one side of each brick glazed in white or other colors. The ceramic glazing material consists of mineral ingredients that fuse together in a glass-like coating during burning. This type of brick is usually reserved for hospitals, dairies, laboratories, or other buildings where cleanliness is extremely important (Integrated Publishing 2003).

Starting around 1870, many manufacturers began stamping one or more surfaces of common, face, fire, and paving bricks with a “brand” or impressed identification. This coincided with the development of high production brick machines, since this meant that the name, logo, or hometown of a company could be pressed into the surface of a brick during the manufacturing process (Kelly and Kelly 1977). Bricks were being branded long before this period though, just at a greater cost of time and energy. Gurke (1987:125) reports that “as early as the third millennium B.C., brickmakers in Mesopotamia were making their bricks with distinctive inscriptions … in the United States, there is an example of four brickmakers in the Pensacola, Florida, area who impressed their names in their products beginning in 1807.” Unfortunately, Gurke (1987) does not mention who these brickmakers were, or where they were shipping bricks. This question is answered however, by Lazarus (1965), who in his article states that Marianne Bonifay, Charles Lavalle and two others started producing bricks in Pensacola with an “M. Bonifay” imprint on them in 1807. Because of information of this type, statements
about when a brick was manufactured, then, cannot accurately be based on the presence or absence of a maker’s mark or brand.

Without a maker’s mark or other telltale signs of manufacture, it is difficult to identify the origin of a common brick. One reason for this is that the proportions of common bricks have not greatly changed in over 4,000 years. These generalized proportions have been stuck with because the geometry of brick walls relies heavily on the width of a brick being approximately twice its thickness, and its length being equal to or a little more than twice its width. Bricks of equal size are also important because they allow the mason to create smooth bonds and to interlock the different courses of bricks for greater strength and durability (Lazarus 1965). Another reason why the identification of bricks from archaeological sites is so difficult is that not much research has been done on the subject. Although bricks can be found at a large percentage of historical sites, there have been only a few articles and books written specifically about historical archaeology and bricks. Often bricks are overlooked by archaeologists in favor of more colorful and exciting artifacts, which results in not many professionals taking an interest in studying bricks or their history.

During the past three field seasons at Indian Key, ten samples of bricks from different features around the island have been collected and cataloged (Keffer 2002) (Table 1), to determine whether or not it would be able to identify different periods of use and/or construction through the examination of these materials. Most of the samples consist of dark red fragments of common bricks with no maker’s mark or name. One of the bricks collected from Indian Key (sample 02G7), is a pale brown or tan pressed brick,
with dimensions matching those of bricks manufactured by the Bacon and Abercrombie
brickyard in Pensacola, and used in the construction of Fort Jefferson in the Dry Tortugas
(Lazarus 1965).

**Table 1.** Indian Key brick samples from Keffer 2002.

<table>
<thead>
<tr>
<th>Sample</th>
<th>Feature</th>
<th>Description</th>
<th>Length (in.)</th>
<th>Width (in.)</th>
<th>Height (in.)</th>
<th>Weight (g)</th>
</tr>
</thead>
<tbody>
<tr>
<td>02G7</td>
<td>G</td>
<td>used, pale brown pressed brick</td>
<td>9.0</td>
<td>4.2-4.4</td>
<td>2.5</td>
<td>3368.5</td>
</tr>
<tr>
<td>IKAY</td>
<td>A</td>
<td>used, face brick pressed, dark red body</td>
<td>7.65</td>
<td>3.5-3.6</td>
<td>2.15</td>
<td>1904.0</td>
</tr>
<tr>
<td>IKB2a</td>
<td>B</td>
<td>used common brick fragment, poss. hand molded</td>
<td>n/a</td>
<td>4.25</td>
<td>2.45</td>
<td>812.5</td>
</tr>
<tr>
<td>IKB2b</td>
<td>B</td>
<td>used, medium reddish brown pressed common brick fragment</td>
<td>n/a</td>
<td>4.5</td>
<td>2.55</td>
<td>1320.5</td>
</tr>
<tr>
<td>01-F-07</td>
<td>F</td>
<td>used, dark red, crumbly, very sandy, pressed fragment (may be floor tile)</td>
<td>n/a</td>
<td>3.75</td>
<td>2.05</td>
<td>521.0</td>
</tr>
<tr>
<td>01-F-50</td>
<td>F</td>
<td>Fine grain, red, pressed fragment (may be floor tile)</td>
<td>n/a</td>
<td>n/a</td>
<td>2.00</td>
<td>261.5</td>
</tr>
<tr>
<td>surface near chimney feature</td>
<td>F</td>
<td>two used, very light weight, sandy paste, handmade brick fragments</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>381.0/494.5</td>
</tr>
<tr>
<td>01-F-60</td>
<td>F</td>
<td>pressed white specialty tile fragment with white slip on surface (oven liner?)</td>
<td>n/a</td>
<td>n/a</td>
<td>1.45</td>
<td>91.0</td>
</tr>
<tr>
<td>n/a</td>
<td>n/a</td>
<td>dense, pressed brick, pale gray, custom firebrick (oven liner?)</td>
<td>n/a</td>
<td>n/a</td>
<td>1.90</td>
<td>858.5</td>
</tr>
<tr>
<td>02-G/F-17</td>
<td></td>
<td>half of a bat, unused firebrick branded in two lines “Ruff.. &amp; Storub..”, probably from West Midlands, England</td>
<td>n/a</td>
<td>4.5</td>
<td>2.50</td>
<td>1755.5</td>
</tr>
</tbody>
</table>
Construction on Fort Jefferson began in 1846, with the first bricks being used in 1847, when bricks from North Danvers, Massachusetts, were used in the construction of officer’s quarters. Three years later, the engineer supervising the construction of the fort visited brickyards in Pensacola, Florida and Mobile, Alabama. He found the Pensacola bricks to be superior and recommended their use for all exposed surfaces, with northern bricks behind them forming the rear course next to the concrete core. Pensacola bricks were also larger, averaging 90 cu in., while northern bricks averaged less than 60 cu in. The first order of bricks from Pensacola was not placed until 1853. When the purchase order for the requested southern bricks finally came through, companies in Pensacola (principally Bacon and Abercrombie), Mobile, New Orleans, Charleston, and Savannah pressed millions of bricks for the fort before the Civil War (Bearss 1983; National Park Service 1993).

The bricks bought by the government from these brickmakers were not only going to Fort Jefferson. Starting in 1855, the Bacon and Abercrombie Brickyard in Pensacola manufactured 65 million quality bricks for “various military fortifications along the coast of Florida” (Lazarus 1965:79). They supplied the governmental bricks until 1861, when, for an unknown reason, the Bacon and Abercrombie Brickyard sent notice to Fort Jefferson that it would not supply any more bricks or lumber (National Park Service 1993). There is no way to know when the Fort Jefferson-size bricks found at Indian Key came to the island, only that it was sometime after 1853. Once Bacon and Abercrombie discontinued shipping their bricks to Fort Jefferson, surplus bricks were most likely sold to the public. These bricks could have also been brought to the island when the
government constructed Carysfort Reef lighthouse there between 1871 and 1872. This seems a more likely scenario, as the bricks that were manufactured for Fort Jefferson cost one dollar a brick for transportation alone (Hatton 1987), and the average person, especially those living on a small island in the middle of the Atlantic Ocean, could not afford to buy such expensive materials. The majority of the other bricks, including those found in Features D, E, and H (the circular cisterns), are common bricks with no obvious markings. These bricks were most likely brought to the island by the Navy, but cannot be assigned a specific date, as the dating of common bricks is not yet a precise enough science.

There are reports that bricks were being made in and shipped out of the Pensacola Bay area before 1827 (Lazarus 1965). It is very possible that some of the bricks made it down to Indian Key prior to the Naval occupation, either by being purchased by someone there, or by being part of a wreck that was brought to the island. The date that a brick was manufactured though, does not have to equal the date it was used in a structure or building, and as of this date, there is no way of positively knowing when or from where bricks arrived at Indian Key.

*Plaster*

Plaster has a long history of use in the field of architecture, and was utilized in some shape or form in nearly every building built in the world up until the 1930s or 1940s because of its variety and adaptability to any building size, structure, shape or
configuration. Its versatility means it can be applied to a wide assortment of materials including brick, stone, timber, or frame construction.

Up until the end of the 19th century, when changes in the manufacturing process made gypsum the favored plastering medium, plasterers used lime plaster made from four ingredients: lime (from ground and heated limestone or oyster shells), aggregate (sand), fiber (cattle or hog hair), and water. Traditionally, bags of quick lime are mixed with water to “hydrate” or “slake” the lime (MacDonald 1989:2). As the two mix, heat is given off, and as it cools, a lime putty is created. This putty is then mixed with the sand, water and animal hair to make “coarse stuff” (MacDonald 1989:3), the first layer in a standard 3 coat or layer process. This first coat, applied in a 3/8-inch thick layer, is also called a scratch coat, because it is scored in two directions with a 3-pronged wooden scratcher to help the second coat bond to the first (Poplar Forest Architectural Restoration 2003). Evidence of this “scratching” can be seen in the floor of Feature C, where there is evidence that a second, and in some places, a third layer of plaster had been applied to the floor (Figure 20). The second coat, known as the straightening or brown coat, is applied up to several weeks later after the first layer has had time to cure. This coat is the same thickness as the first. The third and final layer, referred to as the white or finishing coat, contains a much higher percentage of lime putty, little aggregate, and no fiber, giving the wall or floor a smooth white finish. Some plasterers moisten this coat with a damp brush as they lay it down to ensure that it is smooth. This last layer is applied in a much thinner coat than the first two, at 1/8 of an inch compared to 3/8 (MacDonald 1989, Poplar Forest Architectural Restoration 2003).
There is no equal to the strength and durability of the three-coat system of plaster application. It not only resists fire, it also reduces noise transmission to and from the buildings or rooms to which it is applied (MacDonald 1989). Plastering is a skilled craft, requiring years of experience and training and special tools. No documentary evidence has pointed to Housman hiring a plasterer to work at Indian Key. This may have been a skill that James Dutcher or some other craftsman living or working on Indian Key possessed. It may further be inferred that a Naval worker completed a portion of the plastering because of the placement of the three coats of plaster on top of a layer of bricks instead of right on the bedrock in Features B and C, an idea furthered explored in the Results section.

*Mortar*

Mortar has been used in the construction of masonry structures for thousands of years. The same lime putty used for plaster is mixed with sand, usually in a ratio of 1 part lime to 3 parts sand by volume. Other ingredients such as clay, natural cements, brick dust, pigments, animal hair, and crushed marine shell could be added to the mortar, but the basic recipe of lime putty and sand remained unchanged until the arrival of Portland cement in the early 1800s. Portland cement, patented in Great Britain in 1824, is a fast-curing, hydraulic cement that hardens under water. Although it was not manufactured in the United States until 1872, it was regularly imported. Up until around 1900, portland cement was considered primarily an additive to help accelerate mortar set time. By the 1930s, most masons used an equal mix of portland cement and lime putty in
their mortar (Mack and Speweik 1998). It is an expression of the experimental time between the advent of portland cement and its common use that is seen at Indian Key. This idea will be more thoroughly explored in the Results section.

**Figure 21.** Floor of Feature C, showing evidence of “scratching” on the first layer of plaster over the brick floor. Photograph taken by Dr. Brent Weisman on May 15, 2000, facing northwest.

*Cisterns*

All of the building materials previously discussed were used in the construction of the many different types of cisterns found on Indian Key. These structures have been reused more and have remained intact better than any other architectural feature built on the island. Cisterns are also an interesting architectural feature, in that they are extremely
important to the daily life and activities of those who depend on them for water, but are always somewhat simple in design. There are relatively few ways of building a functioning cistern, and there is no doubt that the residents of Indian Key, from Housman to McLaughlin and beyond, experimented with cistern construction and location, as people in other parts of the United States had been doing for quite some time.

In a report on San Francisco’s cisterns, Boden (1937:2) notes that very early (pre-1800s) cisterns were sometimes made only of a sunken wood box made of “tar-soaked planks with caulked seams.” In the 1850s in that city, many cisterns were rebuilt in brick, with the early covers made from wooden flat tops and later covers made of arched brick tops. These cisterns were variously round or square (Boden 1937).

An 1863 description of cistern construction by Inashima (1990) states that once the area of the proposed cistern has been excavated to the appropriate depth, the ground surface at the bottom should be paved with a flat course of bricks grouted with cement, and covered with two layers of tiles. The side walls should also be composed of grouted bricks. The entire interior should then be covered with a one-inch thick layer of cement (or plaster, as seen at Indian Key) (Loudon 1863).

A 1997 study of cisterns in a southwestern Virginia county found that cisterns were built out of various materials, including concrete (88%), concrete block (9%), and plastic (3%) (Virginia Water Resources Research Center [VWRRC] 1998:7). They were also lined with various materials, including paint (63%), plaster (6%), plastic (6%), and an unknown substance (6%). Nineteen percent (19%) were not lined (VWRRC 1998:8). Forty-nine percent (49%) of the cisterns were 11 to 50 years old, 38% were less than 10
years old, and 13% were more than 50 years old (VRRRC 1998:7). Some of the cistern owners reported that they annually re-lined the cistern to prevent cracks and leaking (VRRRC 1998).

A circular printed by the State of Illinois (1958) Department of Public Health notes that a municipal water system is the most desirable source of water for homes or businesses, followed by a well, and then by a cistern. Cisterns are described as being typically constructed of brick or stone, with an inside plaster of cement mortar, although they are never permanently airtight (State of Illinois 1958).

Of cistern filters, Lye (1992) notes that some cistern systems try to incorporate some type of sedimentation or filtration between the catchment area and the storage chamber. The filters vary from simple sand filters (which must be maintained periodically) to gravel, fiberglass, charcoal, or permanent cinderblock filters incorporated into the cistern design. In some cases, a simple settling chamber is built to remove sediment before the water is transferred to the larger storage chamber (Lye 1992).

Since rainwater was the only source of freshwater on Indian Key, its collection was extremely important to its residents. There is no doubt that the construction plans of the houses and other buildings on the island were modified in order to collect the greatest amount of water. Roofs were most likely peaked or hip in style, with long, overhanging eaves and gutters of some type to funnel the rain down into the cisterns found below these structures. Galvanized steel and aluminum roofs are the best and most commonly used cistern catchments, as rough surfaced roofs collect dirt and debris (such as bird droppings, leaves, dirt, and other foreign materials) that add organisms to and affect the
quality of the water. To help prevent these types of contaminants from entering the
system, sand, gravel, or charcoal filters are sometimes used. All of these filters require
frequent maintenance to prevent pollution of the water. Roof washers, consisting of a
valve and a shunt tap system, may also be used to filter the rainwater. They are cheaper
to construct and require less maintenance than filters. They work by trapping the first
flow of water that comes off a roof and channeling it away from the cistern (University of
Florida Cooperative Extension Service 2003). More than likely, different methods of
filtering the water at Indian Key were used at different times. We do know, from at least
one historical reference that during the late 1830s, water was “strained before drinking to
get rid of any wrigglers” (mosquito embryos) (Perrine 1885:17). There is no mention by
Perrine of how this “straining” was accomplished.

Once the water is in the cistern, there has to be a way of getting it out. Any
cistern located on or below the ground surface requires a pump to provide water pressure.
There have been no pumps or pump systems found at Indian Key as of this date. One
explanation for this may be that pumps are quite valuable and movable; they can be
hauled off and used somewhere else. This is most likely the case at Indian Key, where
the inhabitants, whether they were wreckers, fishers, or the Navy, probably took their
pumps with them when they left. They may have also been salvaged by other island
visitors, or washed off the island by one of the many storms that have gone over Indian
Key through the years.

Another feature likely related to the extrication or filtration of water from a
cistern is the semi-circular feature found on the floor of Feature B (Figure 21). When
Baker (1973) excavated the interior of this feature, he found that the plastered floor sloped gradually to the southeast corner, which contained this horseshoe-shaped plastered brick basin. This may have served as a filtration device, allowing sediment to settle in this lower corner, or it may have been where the pump and associated pipe connected the cistern to the kitchen above, ensuring that there was always water near the pump.

**Figure 22.** Horseshoe-shaped basin in Feature B with interior dimensions highlighted. Photograph taken June 6, 2003, facing east.
Chapter Five: Results

Key West/Bahamian Architecture

After examining the descriptions of the original Housman buildings taken from various documentary sources and the architectural remains themselves, similarities between the architecture of Indian Key and the famous Conch architecture of Key West emerge.

Most of the historic homes found both in Key West and the Bahamas today are of frame or masonry and frame construction. For the most part, they all exhibit what Shiver (1987:10) refers to as a “tenacious adherence to a handful of extremely simple forms.” There is almost a complete absence of “high style” architecture, which, when combined with the limited styles, means that many of the early buildings in Key West are indistinguishable from the older ones. This is a result of Key West starting out as an industrial town, with a population comprised mostly of wreckers and mariners. Ships’ captains from New England, the Carolinas, and the Bahamas often had their ships’ carpenters build their houses, which may well account for the almost uniformly symmetrical designs seen throughout Key West (Caemmerer 1992). The individuals who built many of the early homes probably had very little, if any, formal architectural training, and were from both the Bahamas and the United States. They learned through observation and trial and error, as they were “incapable of fully adapting to the demands
of refined architectural theory: (Shiver 1987:13), and without using any formal plans, produced a “distinctive and functional architecture refined from their practical experience at precise, durable ship construction (Wells and Little 1979:13). For the fledgling homeowners of Key West though, there were not many other options, unless they wanted the expense of hiring and sending for a trained architect.

The typical Key West house, according to the Federal Writers’ Project Guide to 1930’s Florida (Federal Writers’ Project of the Works Progress Administration for the State of Florida 1984:197) was:

A one-and-a-half story frame structure put together with mortise and tenon joints, and secured by pegs and trenails, is anchored deep in the native coral rock. None has a basement because of the solid rock beneath the topsoil. Few are painted, for paint does not last long in the tropics. Roof area is of prime importance because the city depends solely on rain for its drinking water, as that obtained from drilled wells is brackish. Many houses have roofs with two and even three combs, and every inch of roof space is drained into pipes leading to backyard cisterns. Most houses have slatted shutters, which remain closed to keep out the glare, the slats permitting a free current of air.

The majority of the above statements most likely apply in one form or another to Indian Key during the Housman period, as the vernacular architecture seen on Indian Key is clearly related to that of Key West. The majority of the shipbuilders, seamen, and wreckers who constructed the homes of Key West were either immigrants from the Bahamas or sailors originally from the northeast. Houses built during this early period were probably an amalgamation of styles, brought together and adapted to fit the tropical climate. From the Bahamians came the open porches and large verandas; the louvered
shutters to keep out the heat and glare, and the square or rectangular, aboveground cisterns that stood alongside or under each house or kitchen. New England homes were the inspiration for the deep overhanging roof eaves that provided shade, as well as allowing for an upward circulation of warm air (Hatton 1987). The “Oldest House in Key West,” the former home of wrecker Captain Francis Wallington, is an example of a New England/Bahama house that was constructed by a ship’s carpenter in 1829 using components from both geographical locations as well as from sailing vessels (like the ship’s hatch cut into the bedroom roof for ventilation) (Figure 22). This house is probably quite close to what the larger houses on Indian Key looked like. In fact, Indian Key was home to two carpenters, Glass and Beiglet, whose experience more than likely included some work on various types of ships. The fact that the early Key West houses were styled after the houses in New England and the Bahamas would have suited Jacob Housman well, as these were structures that reminded him of home, but were adapted to a tropical environment.

Although the foundations and cisterns associated with the original houses on Indian Key were masonry in nature, the houses themselves were undoubtedly constructed out of wood, just as the majority of historic Key West homes are. In the nineteenth century Keys, wood was available from a number of sources, including by way of wrecked cargo ships. Lumber was also being directly imported to Key West in the form of mahogany from Honduras, cypress from the upper Keys near the Florida mainland, and pine from Pensacola, Mobile, and Pasagoula (Starr 1975). Before wrecking brought the arrival of the carpenter-architect to Florida, houses in the territorial period were
usually constructed of wood in the form of imported lumber, shipwreck salvage, or rough logs, or tabby (a mixture of sand, water, burned shells for lime, and shells that served as filler for building mortar that was poured into wooden forms (Hatton 1987). It is more than likely that the wood used on Indian Key during the pre-Housman, Housman, and post-Naval periods came from some of these same sources the early Key West lumber came from.

Figure 23. Francis Watlington house in Key West, built in 1829 (Old Island Restoration Foundation 2003).

During this earliest period of construction, ships carpenters employed a mortise and trenail (a wedge or hard wooden pin driven into an exposed dowel to secure the timber) type of construction, as this was used both in vessels and houses of the time, because nails were hand-forged and had to be imported from England and Spain at a high cost (Sherrill and Aiello 1978). Besides mortise and trenail, there are two other types of
construction used a little later in the construction of the historic houses of Key West, braced frame and balloon. In braced frame construction, heavy vertical corner posts are framed into the sills that then rise to support the roof plate. Girders framed into the corner posts support the floor for each story, and the whole house is held together using mortise and tenon joints. In balloon frame construction, the weight of the roof plate is supported by multiple vertical studs that have been fastened to the sills. The studs also support the floor joists, which rest on the roof plate. This is the most popular type of construction employed in the United States, and was used nationally after 1830 (Caemmerer 1992, Hatton 1987).

Some of the carpenter-architect craftsmen supplied more than just the plans for the homes they were constructing. Plaster was often replaced in interiors by mahogany or cedar timbers, salvaged by wreckers from a vessel damaged in the nearby reefs. Other common house amenities included windows and doors that were shuttered, especially if exposed to direct sunlight or wind, and wood-shingled roofs (replaced by metal and crimped sheet metal in the 1900s) (Sherrill and Aiello 1978).

Porches were also of great importance to the tropical-environment homeowner. These provided more livable space, as well as a means of keeping the interior of the house cooler, by providing more shade. In two-story houses, there is also usually a porch on the second story, called a gallery. Chimneys are rare in Key West, although when they are found it is in outside kitchen buildings, separate from the main house. This keeps the heat away from the home, and also serves as fire prevention. This separation of
home and kitchen was a familiar theme during the early to mid-nineteenth century (Gaske 1982, Lees 1980), and can be seen in the architectural footprint of Indian Key.

It may be inferred that Jacob Housman took more than an interest in wrecking from his time spent down in Key West. It seems that he may have absorbed the eclectic style of architecture that was emerging, thanks to the carpenter-architects of the island and the ever-increasing population of Bahamian and New England immigrants. The more Classic revival portion of this building style would provide a sense of grace and society to the barren rock that Housman was determined to make his Eden, while the Bahamian influence lent its comfort and suitability to the tropical environment.

Post Office

Former mayor of Key West Walter Maloney, a clerk employed by Jacob Housman in 1840, left Indian Key for Key West a few weeks before the events of August 7. Thirty-seven years later, Maloney was prompted to respond to an article published in the Key West newspaper, Key of the Gulf, which detailed the destruction of Indian Key. Within the letter, he states that he arrived at Tea Table Key two days after the attack, and that he accompanied Charles Howe back to Indian Key. After arriving on the island, Maloney followed Howe “into the room in his dwelling which he had used as the Post-office of the island” (Maloney 1876), so that Howe could show him how fortunate it was that he did not lose his papers or other items important to him.
Maloney’s letter is very valuable, in that it corresponds to other historical documents that stated that the Howe home was one of the only buildings left standing after the fire, but more important, it rules out Feature L as the Post Office.

On the subject of the Indian Key Post Office, Dodd (1948) notes that Charles Howe became postmaster in 1836, and remained in that position until March 31, 1842. After Howe, I.W. Marshall and Luther A. Hopkins both ran the post office until it was discontinued in May of 1843. The post office was reestablished in November of 1850, discontinued twenty-three years later, then reestablished again in 1880 for five months, before being discontinued again in September of that same year (Bradbury and Hallock 1962). The re-use of Howe’s home as the post office by at least Marshall and Hopkins is most likely. The building may have continued to be used in this capacity by later postmasters, but no evidence to support this has yet been uncovered.

Cisterns

A firm argument can be made that the round cisterns, Features D, E, and H, were constructed by the Navy during their two-year period of occupation of Indian Key. This idea is supported by both the architectural, archaeological and documentary evidence, since these structures do not appear on either the Howe (1840) or Perrine (1885) maps. Furthermore, in the place that they would occupy on these maps stand four houses with kitchen/cistern outbuildings. We know through naval documents (McLaughlin 1844, Weidenbach 1995) that the Florida Squadron constructed twelve buildings, including some cisterns, on Indian Key when they took possession of the island in the summer of
1840. It is possible that what remained of the four houses and outbuildings in that area were too badly destroyed by the fire, and that they were removed by the Navy so that they could construct usable cisterns near the center (the highest part) of the island. The debris from the demolition/removal of these features could have been moved to another part of the island, and may be part of Feature K (an ill-defined concentration of building rubble and artifacts located approximately 20 m north of Features A and C) (Baker 1973), or may have been deposited offshore somewhere around the key. Features F and G may have been in better shape, so they were left in place and reused to a great extent, especially Feature F.

The circular cisterns found on Indian Key are the only completely brick structures on the island, and are architecturally consistent with the design the Navy was using in other areas during the same time period. One of these places is Fort Pulaski, located on Cockspur Island in Chatham County, Georgia, approximately 15 miles east of Savannah. Fort Pulaski was one of the Forts of the Third System of the United States, commissioned by President James Madison after the War of 1812 illustrated the ineffectiveness of the U.S. coastal defense system. Fort Jefferson in the Dry Tortugas and Fort Taylor in Key West are also part of this thirty fort system, which stretches from Maine to New Orleans (National Park Service 2003, Wilkinson 2003e).

Southeast Archeological Center National Park Service archaeologists identified circular brick cisterns and square brick structures during their investigation of Cockspur Island (National Park Service 2003:2). Work on these features to this point has been focused on mapping and cataloging, with limited excavations. As a result of this initial
research, the archaeologists have been able to associate these features with the
construction village associated with the fort. Construction began on Fort Pulaski in 1829,
and continued off and on until 1847. Based on maps drawn by Lieutenant Robert E. Lee
and Lieutenant Joseph K.F. Mansfield, who both supervised the construction of the fort at
different times, the researchers were able to locate and identify some of the masonry
remains. According to the maps, the construction village consisted of three laborers
quarters, a bakehouse, a mechanics boarding house (storm house), master workman’s
(mechanic’s) quarters, superintending engineers quarters, an office, assistant engineering
quarters, a blacksmith shop, a stable, a customs/boatemns house, and various associated
cisterns. All of the wooden structures related to the remaining brick features were
destroyed by three separate hurricanes in the second half of the 19th century (National
Park Service 2003).

During the 1999 field season, six shovel tests were dug around two of the square
brick features in the construction village. These tests yielded various artifacts including
coal, cinders, metal fragments, nails, brick and mortar rubble, oyster shell, mammal and
fish bones, glass, and historic ceramics. The ceramics dated to the period of the fort’s
construction (1829-1847), and the historic maps and fieldwork led to the interpretation of
these features as ovens or stoves. The general shape of these foundation remains, as well
as some of the materials used, such as the brick and mortar utilized in the foundations,
and the wood for the upper structures, closely resembles some of the features found on
Indian Key, specifically B, F, and G.
The town of Woolsey, built by the U.S. Navy in the 1820's to house the workers building the Naval Yard in Pensacola, Florida (now the Pensacola Naval Air Station), is another example of early naval architecture. From 1994 to 1998, the Pensacola Archaeology Lab (PAL) monitored a large construction project that impacted the historical zone of Woolsey at the Pensacola Naval Air Station. During the PAL investigation, four largely intact round brick cisterns were uncovered in the Woolsey project area. The cisterns measured approximately 2 m in diameter, were 70-80 cm deep, and were all lined in plaster (Curren et al. 1998). Although these cisterns are much smaller than those found at Indian Key, the basic similarities in material and shape are enough to suggest the use of a governmental template concerning cistern construction in the early 19th century.

The presence of circular brick cisterns at Fort Pulaski and Woolsey, and the square brick foundation remains at Fort Pulaski lends some validity to the argument that the circular cisterns found on Indian Key, Features D, E, and H, were constructed during the Naval occupation of the island, and furthermore, that other features, such as Features B, F, and G were repaired and re-used by the Navy, perhaps as kitchens/cisterns or stoves/ovens.

Mortar

In the fall of 1989, the Programmed Plan for the Stabilization, Maintenance and Protection of Indian Key State Historic Site, Monroe County, Florida was completed for the Friends of Islamorada Area State Parks (Decker et al. 1989). As part of this plan, six
samples of masonry and mortar from four different Indian Key features were sent to the Erwin Chemical Laboratory in Miami for analysis. One sample of plaster came from the bottom southeast corner of Feature B (also known as IK-1); one sample of mortar (IK-2-1), one large red brick section with three mortar joints (IK-2-2), and one plaster/brick fragment (IK-2-3) were all taken from the east side of Feature E; one sample of plaster was taken from the southwest corner of Feature F (IK-3); and one sample of plaster was taken from Feature M (IK-4). The analysis of the material revealed that every one of the samples was made up of the same three ingredients: silica sand, portland type cement, and magnesium and calcium compounds (lime) (Decker et al. 1989). The exact percentages from each sample are given in Table 2.

Table 2. Analysis of masonry samples from Decker et al. 1998.

<table>
<thead>
<tr>
<th>Sample Number</th>
<th>Feature</th>
<th>Silica Sand</th>
<th>Portland Type Cement</th>
<th>Magnesium and Calcium Compounds</th>
</tr>
</thead>
<tbody>
<tr>
<td>IK-1</td>
<td>B</td>
<td>20.56%</td>
<td>30.07%</td>
<td>45.20%</td>
</tr>
<tr>
<td>IK-2-1</td>
<td>E</td>
<td>35.04%</td>
<td>8.81%</td>
<td>51.40%</td>
</tr>
<tr>
<td>IK-2-2</td>
<td>E</td>
<td>34.26%</td>
<td>5.19%</td>
<td>55.60%</td>
</tr>
<tr>
<td>IK-2-3</td>
<td>E</td>
<td>22.02%</td>
<td>15.12%</td>
<td>58.00%</td>
</tr>
<tr>
<td>IK-3</td>
<td>F</td>
<td>1.12%</td>
<td>51.05%</td>
<td>43.20%</td>
</tr>
<tr>
<td>IK-4</td>
<td>M</td>
<td>2.43%</td>
<td>39.43%</td>
<td>54.10%</td>
</tr>
</tbody>
</table>

Since the analysis of the masonry compounds found no fiber component, as one would expect in a traditional plaster, but did find portland type cement (not used in plaster) in every sample, it seems as though the compound referred to as plaster on Indian Key, may actually be a type of mortar. Furthermore, the samples from Features B and E had a relatively strong and typical mortar strength, and exhibited traditional sand to
cement ratios. The samples from Feature F and M on the other hand were found to be below the typical strength and durability for mortar from this time period, making them more susceptible to decay and leakage. One reason for this might be that Features F and M were plastered or mortared during the Housman period, while Features B and E, both of which had plaster/mortar applied on top of bricks instead of bedrock, were treated during the Naval occupation of Indian Key.

While both periods of use added cement to their mix, most likely out of necessity because of the porous limestone bedrock, it was the later work by the Navy that got the proper mix for strength and durability. It seems that whoever applied the earlier plaster/mortar layers used too little sand, as compared to the amount of cement, making the plaster/mortar still somewhat strong, but the result is most likely not the work of a trained professional. We know that the necessary supplies were purchased by Lt. McLaughlin, who, while trying to account for his expenditures to the House of Representatives, wrote that he had purchased lime and cement that were used in the construction of a bake oven and cisterns (McLaughlin 1844). The person who applied the plaster/mortar in the later Naval period used methods and tools usually reserved for plastering, such as using three coats, and "scratching" the first coat with a wooden scratcher to help the second layer bond to the first, as seen in Feature C. No matter which period of construction is being discussed, it is apparent that the craftspeople who built the masonry structures and foundations on Indian Key were quite capable, and their adeptness is apparent in the fact that their work still stands today, over 150 years later.
When looking at the differences between the floors of Feature A and Feature C, it can be theorized that the original floor of both features was simply smoothed bedrock, or one layer of plaster/mortar over the bedrock, as is the current state of Feature A. More work seems to have been completed on the floor of Feature C, perhaps during the Navy’s occupation of the island. On top of the bedrock and single layer of plaster lies a layer of bricks, then up to three layers of plaster/mortar in some areas. The same three-layered floor construction can be seen in Feature B, located just to the east of Features A/C. This may have been an attempt to create a more watertight cistern in the warehouse and Feature B for use by the Navy, as the use of bricks seem to correlate to that period of occupation.

The type of buildings and the way in which they were constructed on Indian Key during various periods of occupation seems to be a mix of contemporary practices and new ideas, which were then adapted to suit the tropical and isolated environment the inhabitants of this small island found themselves in. This style of building included borrowing architecturally from New England and the Bahamas, periods of trial and error, and the re-use of materials and structures already present on the key. From the high level of integrity of some of the oldest features found on Indian Key, it is clear that the builders of the various structures on the island did a fine job in creating a lasting habitat.
Chapter Six: Summary and Conclusions

After investigating Indian Key, it becomes clear that more than one style of architecture is present. From his hometown of Staten Island, Jacob Housman brought the basic plan of the island, including the centralized town square. A clear Bahamian influence was taken from his time spent in Key West, with the cupolas and open porch designs of some of his houses. Architecturally, Indian Key is a blend of different styles that have been uniquely adapted to suit its location. The reuse and remodeling of some of the features on the key can be dated relative to one another, but cannot be given an absolute date, presenting an opportunity for further research into the architecture of this island.

Historical documents have suggested that some kind of architectural template was employed on Indian Key during the Housman period of occupation. In his affidavit, James Dutcher, the marble cutter from New York who was paid to quarry the large cistern in the warehouse, mentions that by 1838 there were several other cisterns on the island similar to the one he constructed in the late 1830s (Dutcher and Dutcher 1846). The other cisterns mentioned are probably the rectangular cisterns associated with the eight cottages and kitchens located near the center of the island (of which only Features F and G remain) and Senator English’s cottage and kitchen (Feature B) just to the west of the warehouse (Features A and C). All of these cisterns are rectangular in shape,
measuring between 5.5-x-3 m and 6-x-3.5 m in size, and are all constructed of mortared coral bedrock walls with a plastered bedrock floor. Most likely during the Navy’s occupation of the site, a plastered brick floor was added to Feature B, and during an unknown period of occupation, a “backyard stoop” consisting of a course of bedrock blocks mortared to the surrounding bedrock (Collins 2002:166) was affixed to Feature F.

Besides these additions, the basic layout and construction of the remaining rectangular cisterns is quite similar to that of the warehouse, just in a smaller scale. From the historical maps and documentation (Howe 1840, Perrine 1885), it is known that the cottages associated with the cisterns that lined the center of the island were all uniform in size and shape. The same construction plans were probably used for Senator English’s cottage, and a slightly scaled-down version may have been used for the cottages occupied by Glass, Beiglet, and the slave quarters of Howe and Housman.

Returning to cisterns, there does appear to have been some experimentation concerning their construction on Indian Key. There are two other cisterns that most likely date to the Housman period besides the three previously mentioned. Feature I is a small 4.5 m square bedrock block cistern thought to be related to the Tropical Hotel, because of its location on the key and the artifacts found around it (Baker 1973). There is no clear reason why this cistern is square instead of rectangular like the others found on the island, but lack of materials or space could both be logical answers. Another square cistern, Feature M, is located near the Howe complex in the upper northern portion of the island, and measures 9.8-ft.-square in size. Its walls were poured into frames much like tabby when constructed, and were made out of a clay-like mortar matrix that included
bricks and large stones. This cistern might represent an attempt by Howe to use a more tried and true method of construction, as tabby has been used in Florida houses since the late eighteenth century. When looking at the architecture employed on Indian Key during the Housman period, it must not be forgotten that, although Jacob Housman was quite influential and important to the planning and construction of the island’s earliest buildings, other men and women inhabited Indian Key and brought with them their own ideas and previous experiences. Charles Howe or a member of his household could have constructed the cistern before Dutcher came to the island, or before other materials were made available. The large stones and bricks found in the walls of Feature M could have certainly been ballast on a ship that docked or wrecked near Indian Key. Feature I was most likely built small for a specific architectural demand, and the tabby-like cistern (Feature M) was most likely was an experiment in a construction medium that never worked or fit with the island for some unknown reason. These are just a few reasons of why Features I and M do not seem to meet the original architectural template drafted for Indian Key.

Indian Key has had a long history of sporadic occupation and re-use, as is evident in the archaeological and architectural records of the island. As a means of simplifying the large amount of data presented, a map identifying from which time period each of the twenty-two original features identified by Baker (1973) were constructed, as well as their estimated periods of re-use, was created using the information gathered in this thesis as well as previous archaeological investigations (Figure 23). From this map, it is evident that the majority of the remaining Housman period features are located in the northern portion
of the island, while the features built by the Navy are found inland, near the center of the key. The Naval period features, almost all of which are cisterns, may have been constructed near the center of the island to ensure that they would be easily accessible and that utilizing their water supply would not put a soldier in jeopardy by placing him too close to the shoreline in case of an attack.

There is just one feature on the whole southern end of the island (Feature N), a brick cistern that has not been relocated since Baker (1973) documented it. Historical maps (Howe 1840, Perrine 1885) show that a number of cottages once graced the southwest quarter of the island. Carpenters Glass and Beiglet both lived in these small cottages with separate kitchens or cisterns, which appear to have been razed during a later period of occupation.

This thesis draws conclusions about the architecture of Indian Key by analyzing the results of archaeological investigations as well as historic documents. The ideas presented here are theories that can be refined when further work on the island is completed. Some of the areas and questions that need to be addressed through additional work are those features that do not have any definite dates of use associated with them. These include Features K, N, and P, which all need to be relocated again and investigated more thoroughly. Other Features, such as L, O, and R, are currently visible, but their full usage history remains a mystery.
Figure 24. Map of the archaeological and architectural features found on Indian Key, and their estimated periods of construction and re-use. Base map: Baker 1973.
We know through historic documents (McLaughlin 1844) that the Navy constructed a hospital on Indian Key during its two-year occupation of the island, and that the Perrines utilized a trap door that led down to the water as their “bathroom” (Perrine 1885). We do not however, yet know the exact location of the Naval hospital, nor the site of any other restrooms or sanitation facilities. There certainly would have to have been such amenities available to the residents and guests. Finally, further research needs to be completed to find out what changes Housman and the twenty-four men enlisted in Company B of the Florida Militia made to Indian Key in the late 1830s in order to defend the island better against attack. Some type of watchtower or garrison might have been constructed so that the guards could watch for incoming vessels.

By focusing on the entire history of Indian Key through its architecture, this thesis has attempted to expand the past of the island to include other periods of occupation and re-use of features after the Housman period of the early nineteenth century. Most of the current history of the island being interpreted to the public concerns this one phase of the island’s history. If only one image of Indian Key’s history is put forth, a false impression that the past was one simple, singular story could easily emerge. Without further research concerning the Naval and early twentieth century occupations of the site, Indian Key could become Housman and nothing more than the events of August 7th, 1840.
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