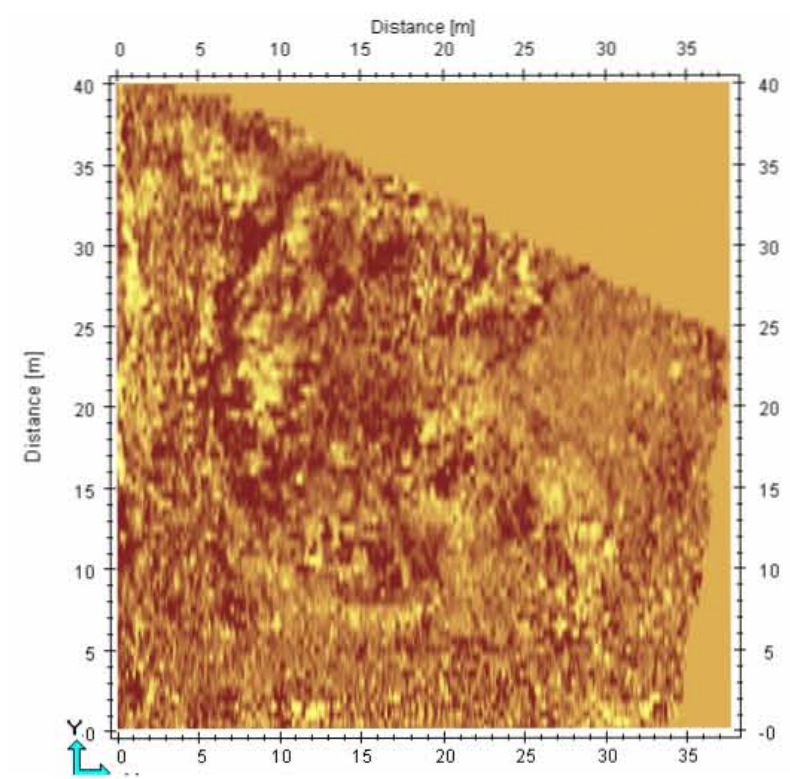


**Archaeological Reconnaissance  
at the Drudi Tract, Tybee Island,  
Chatham County, Georgia**

*LAMAR Institute Publication Series,  
Report Number 127*



*The LAMAR Institute, Inc.*

# **Archaeological Reconnaissance at the Drudi Tract, Tybee Island, Chatham County, Georgia**

*LAMAR Institute Publication Series,  
Report Number 127*

*By Daniel T. Elliott*

*The LAMAR Institute, Inc.  
Savannah, Georgia  
2008*





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## ***I. Introduction***

This report summarizes the preliminary archaeological study by The LAMAR Institute of a vacant lot on Tybee Island in Chatham County, Georgia. The study property, which is located at 25 Taylor Street is shown in Figure 1, as indicated by the green arrow. The project area is located on the northwestern end of Tybee Island, which is a barrier island at the mouth of the Savannah River. This site was recorded in the Georgia Site File as Site 9CH1208.

The report includes a brief review of the history of the study area, photographic documentation of three enigmatic artifact finds, Ground Penetrating Radar (GPR) survey, and systematic shovel testing of the property. Some preliminary interpretations of these data are offered in the final chapter.



**Figure 1. Project Area (Magnetic North is Up, Green Arrow Indicates Drudi Lot, 9CH1208 ) (Google.com 2007).**



## II. Background

### Colonial History

In 1521, a Spanish sea captain named Pedro de Quejos led a slaving expedition to the Bahamas. After scouring the area for some time Captain Ouejos realized that the local population of the Bahama Islands were depleted, so he sailed further further north and west in search of more productive areas. On that passage he met by chance with another Spanish caravel, commanded by Francistco Gordillo, who was also searching for native peoples to enslave. Pedro de Ouejos was employed by a Spanish aristocrat, Lúcas Vázquez de Ayllón. The two ship captains agreed on a pact and continued their voyage together. They discovered a new land, which according to modern historians, was probably a section of the South Carolina coast, which was later known as Chicora. After befriendng the Indians at this place, they enticed about approximately 60 of them on board and then sailed off with them as slaves (Hoffman 1990:1-33).

After learning of their discoveries, Ayllón secured the authority from Spanish King Charles V to explore this newly discovered land. He commissioned Pedro de Ouejos to explore the coastline and Ouejos piloted two ships that sailed from Puerto Rico in 1525 (Hoffman 1990:34-59). Ouejos' ships arrived at the mouth of the a river on May 3, 1525, which he named Rio de la Cruz, or River of the Cross. Hoffman concluded that this was the Savannah River (Hoffman 1990:51; CVI0G 2007). If Ouejos did land at Tybee Island, he probably spent very little time there. Ouejos sailed further north along the coast before returning to report to Ayllón.

After learning of the discoveries made by his pilot, Ayllón led a colonial venture to the newly discovered lands in 1526. His fleet of five ships contained about 600 colonists arrived on the southeastern Atlantic coast of North America. Their first attempted colony of Chicora soon failed and the group sailed further south, where they established the settlement of San Miguel de Gualdape at Rio Seco. That settlement lasted only six weeks. Ayllón died and the colony failed soon thereafter, and the remaining settlers left for Puerto Rico.

Many historians place Ayllón's Chicora settlement in the vicinity of Winyah Bay, South Carolina. Historian Paul Hoffman places Ayllón's settlement of San Miguel de Guadalupe/Guadalpe in the vicinity of Sapelo Sound in McIntosh County, Georgia (Hoffman 1990:68; Avery and Abbatt 1904:272-274). Other scholars, such as Archaeologist Chester DePratter, place San Miguel de Guadalupe was at the mouth of the Savannah River.

Early 16<sup>th</sup> century charts of North America show the region of coastal Georgia. Relevant portions of two maps--the Hernando Colon map of 1527 and the Diego Ribero map of 1529 are reproduced in Figures 2 and 3. Both of these maps reveal the difficulty in locating any archaeological sites from this time period with precision.

In 1733 the northern tip of Tybee Island was selected by James Edward Oglethorpe, leader of the Trustee colony, for a lighthouse in the early 1730s and it has served that function to the present day. Storms and erosion forced the abandonment of two previous lighthouse site locations. The lighthouse has been located in its current position since at least 1773 (Cullen Chambers personal communication, April 14, 2003).



Figure 2. Hernando Colon's map of America, dated 1527.



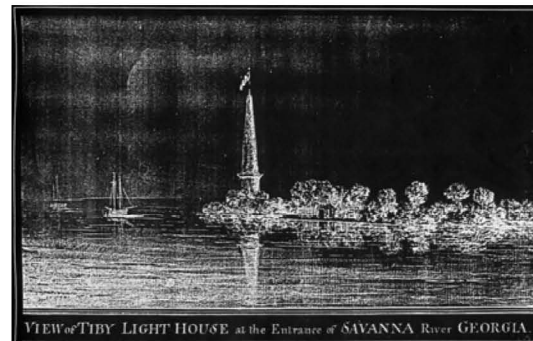
**Figure 3. Portion of Diego Ribero's 1529 Cbirt (LOC 2007).**

The first lighthouse was commissioned as a navigational marker in 1733 and by 1736 a ninety-foot wooden tower was completed. The construction of the tower was supervised by Noble Jones, Georgia's surveyor. Ten families were sent to Tybee Island by James Oglethorpe to settle the area at the time of the first lighthouse construction. The first lighthouse was actually not equipped with a light but was used only as a day mark for guiding ships entering Tybee Roads. The location of the original lighthouse is not known. This lighthouse, which was the largest British lighthouse on the eastern seaboard at that time, was destroyed by a gale in 1741. Historians have not located any graphic images of this original lighthouse.

Within 10 months after the lighthouse was destroyed, a second lighthouse, also constructed of wood and approximately 90 to 94 feet tall, was built. Figure 4 shows a contemporary illustration of the circa 1742 lighthouse and its environs. The tower is shown capped with a flag pole and flag. Like the first tower, the second lighthouse also lacked a light and was only used for daytime navigation. The perspective of this drawing is probably from the east bank of the Tybee Road. A single one-story building, located to the right of the lighthouse, is shown on this drawing. Using the 90 foot lighthouse as a scale, the unidentified building, which may represent the keeper's house, is about 60 feet (roughly 20 meters) from the lighthouse. Henry Yonge's 1751 map, a portion of which is reproduced in Figure 5, depicts the Tybee Light as a triangular symbol and it allows for an approximate location of the lighthouse on the island. The site occupies a low sand ridge, which

was probably part of the original dune formation created by wind and the waters of the Atlantic Ocean. The second lighthouse on Tybee Island was alleged weakened by natural forces and, "fell to wind and sea in 1768", although The NRHP nomination form states that the second lighthouse had received damage and was undermined by the sea by 1758 (NRHP 1982). From 1760 to 1769 numerous recommendations are recorded in the Colonial Records for rebuilding the lighthouse in a more advantageous spot. In 1769 a contract was signed with John Mulryne for the construction of a lighthouse. This contract was later cancelled. Mulryne was a wealthy plantation owner, and a staunch loyalist in the American Revolution (NRHP 1982).

A third lighthouse [presumably wooden] was constructed on Tybee Island in 1773 and was destroyed by fire in 1791 (NRHP 1982). Cullen Chambers places the third lighthouse location in the approximate vicinity of the present-day lighthouse.



**Figure 4. View of the Tybee Lighthouse and Vicinity, Circa 1742 (Marks 1979).**

The third Tybee Island Lighthouse was constructed as a 100-foot octagonal brick structure typical of colonial lighthouse design. Some modern sources place the construction date of the third lighthouse, which was built of brick, in 1773 (Cullen Chambers personal communication March 16, 2003). A redraft of a December 13, 1773 navigational chart of the Savannah River entrance at Tybee Island from the original drawn by William Lyford ("Branch Pilot for the Barr & River of Savannah in Georgia") shows the lighthouse on the extreme northeastern tip of Tybee Island (Wright 1873). This chart also shows a building called "Lazzaretto" and an unnamed fort at the lower end of Cocks spur Island, opposite from Lazzaretto. Lazzaretto was an early quarantine

station. A portion of Lyford's chart is reproduced in Figure 6.



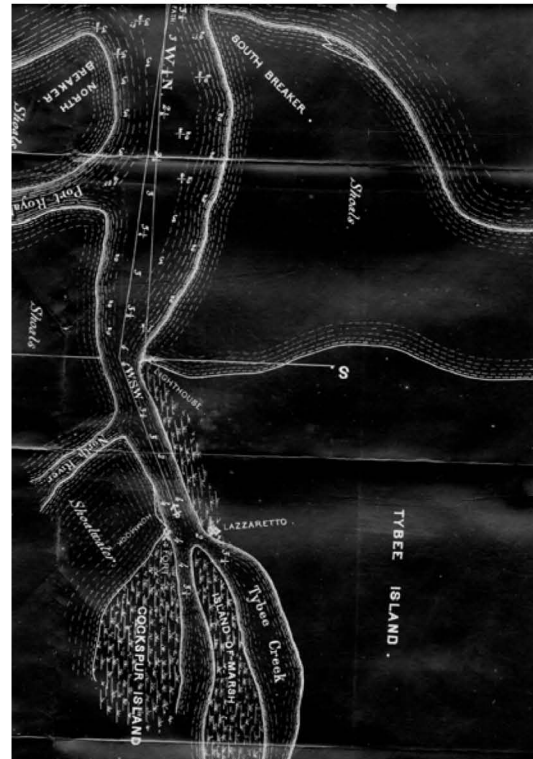
**Figure 5. A Portion of Yonge's 1751 Map, Showing Triangular Symbol Representing the Tybee Light at the Savannah River Mouth (American Memory, Library of Congress 2003).**

Tybee Island was the scene of some military action in the American Revolution. In March 1776 Royal Governor James Wright and his party fled Savannah and took refuge on board British vessels that were lying in Tybee Roads (the entrance to the Savannah River offshore from Tybee Island). Richardson (1886:14) noted that Governor Wright and other loyalists went ashore and, "utilized for their comfort and enjoyment the houses there situated".

The American patriots desired to end this pleasant scenario and dispatched an expedition on March 25, 1776, led by Archibald Bulloch and consisting of, "riflemen, light infantry, volunteers, and a few Creek Indians" (Richardson 1886:14).

Bulloch's expeditionary force descended upon Tybee Island and, "burned every house except one in which a sick woman and several children were found. Two marines from the [British] fleet and a Tory were killed, and one marine and several Tories were captured. Although the *Cherokee* man of war and an armed sloop kept up an incessant fire, the 'Rebel' party, -- consisting of about one hundred men, --sustained no loss, and returned to Savannah in safety

having fully executed the prescribed mission" (Richardson 1886:14).



**Figure 6. Portion of a Redraft of a 1773 Navigational Chart, Showing the Lighthouse on Tybee Island (William Lyford, in Wright 1873:Facing 176).**

Major General Robert Howe, commanding the Southern District of the Continental Army, recommended to Georgia Governor John Houstoun in January 1778 that a fort be constructed at Tybee and Cockspur islands to protect the Savannah River (Bennett and Lennon 1991:67, 90). No records were located, however, to indicate that a fort at Tybee was ever constructed by the Americans. The British sailed past Tybee Island unopposed (but by a single gunboat) on December 23, 1778 before anchoring most of Commodore Hyde Parker's fleet near Cockspur Island. The American troops moved closer to Savannah by Major General Howe to defend that city. As described earlier in the report the British established a small post on Tybee Island sometime after December 23, 1778, but its precise location was not determined from the present archival research. That fort was burned by the British when they abandoned Tybee to join with the forces inside Savannah.

The French held Tybee in September and October 1779 and may have established a camp or battery. The British returned to Tybee following the French departure and may have reestablished a post there. The British control of the city of Savannah and its river mouth held until July 11, 1782, when they evacuated the city of Savannah and returned control to the Americans. Their exit from Georgia to British East Florida took some time to complete. Colonel Thomas Brown, commander of the King's Rangers and the Loyalist Creeks established camps on the barrier islands and continued to harass the Americans for several months. By the Fall of 1782, however, control of Tybee Island was probably returned to the Americans.

An unidentified British soldier recorded in his journal on September 3, 1779, "Saw from Tybee Light-house four large Ships in the Offing; sent Lieut. Lock in the Pilot Boat to reconnoiter them" (Hough 1975:57). These vessels were determined to be French war ships and on September 8, the unidentified British soldier reported sighting 41 ships and that, "an Officer and Reinforcement came to Tybee Fort, which had only one 24-pounder, and one 8 ½ inch Howitzer...", and on September 10 he reported that the French fleet had dislodged the British ships and, "The [British] Fort was abandoned and burnt" (Hough 1975:58-59).

American Thomas Pinckney noted that the British had posted a, "Company of Regulars" at Tybee Island and that Count D'Estaing was determined to attack them. Pinckney was part of the initial invasion force. D'Estaing, "...landed with the Officers of his Staff, the three Americans, and his Bodyguard, composed of a Subaltern's Command of about twenty Marines; we marched near half mile in the direction of the Fort, when D'Estaing, looking back and seeing only his slender Escort, asked the Adjutant General, where were the Troops to reduce the British Post?" An attack on the fort proved unnecessary, however, when the French and Americans learned from "a Couple of Negroes", that the Post had been withdrawn early that morning (Hough 1975:159-160). From September 10 until October 26 the French fleet controlled the Georgia coast at Tybee Island. Soon after October 26 the British returned to Tybee Island (Hough 1975:143).

The NRHP nomination form stated that the base of the present lighthouse was built in 1791 (NRHP 1982:12). The State of Georgia approved the transfer of a five acre tract (465 ft<sup>2</sup>), surrounding the Tybee Island lighthouse, to the United States of America on December 15, 1791. The Journal of the U.S. Senate for February 10, 1792 reported the passage of an act of the Georgia legislature, "to empower their Senators in Congress, or one Senator and two of their Representatives in Congress, to execute a deed of the lighthouse on Tybee Island", in Georgia. The Senate Journal for March 2, 1793 noted that the deed of cession to the United States of the lighthouse on Tybee Island had been executed and was ordered to lie on file. The Senate Journal entry for March 8, 1798 included a resolution for establishing a beacon on Tybee Island (American Memory, Library of Congress 2003).

In the war of 1812, the U.S. Congress authorized funds for military defenses at Savannah and St. Marys (Point Peter). A Martello tower was constructed of tabby at Tybee Island during that period. The Martello tower was located east of the present study area.

The Tybee Island Lighthouse was an important nautical aid in the War of 1812, although its role in that war has not been fully explored. Although most of the military action in the War of 1812 transpired outside of Georgia, federal and state funds were spent to strengthen the defenses at Savannah and Point Peter (near St. Marys in Camden County). The Martello Tower, which was a cylindrical tabby fortification located east of the lighthouse, was built during the War of 1812 era (NRHP 1982). This unique defensive construction was bombarded and captured by the Union Navy in November 1861.

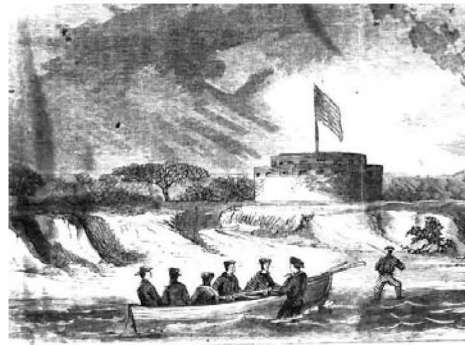
By the early decades of the nineteenth century improvements to navigation at Tybee Roads were needed. The river and bar pilots in Savannah submitted a memorial to the U.S. House of Representatives, which was read on December 11, 1833 and included requests for additional navigation aids at the mouth of the Savannah River. This included: "... two beacon lights ... on Cockspur island;... a light-vessel ... stationed off "Martin's Industry," ... on the knuckle of Saint Michael's shoals; and that other and differently constructed lights may be placed in the light-house on Tybee island" (American Memory, Library of Congress 2003).



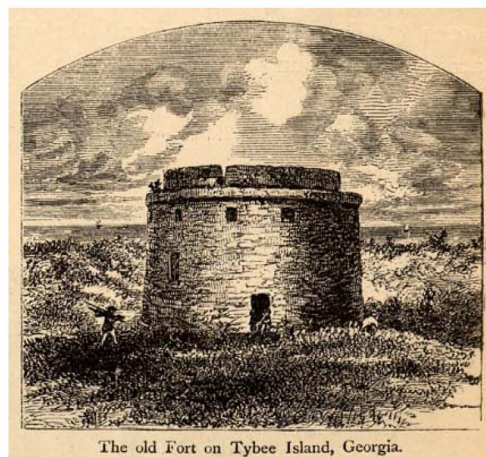
Other navigational aids were constructed at Tybee Roads, including a beacon located east of the main lighthouse, possibly built in 1822, and the Cockspur Island Lighthouse. The Cockspur Island Lighthouse was completed in 1848, destroyed by a storm and rebuilt in 1857. Fort George was erected on Cockspur Island by the Royal government in the 1760s. Fort George was followed by Fort Greene, which was a United States military post built on Cockspur Island in 1804 and summarily destroyed by a major hurricane in 1808. Construction of Fort Pulaski by the United States Army began in 1829 and was completed in 1847. Fort Pulaski was destroyed by the Union Army in April 1862 (Totton 2000).

In 1838 the Tybee Lighthouse was described as an all brick structure, 95 feet in height. In 1841, the lighthouse was refitted with a new lens and in 1857 it was refitted with a Fresnel lens (NRHP 1982). The Journal of the U.S. House of Representatives for September 19, 1837, included a petition presented on behalf of James King, keeper of the lighthouse at Tybee Island, “praying for an increase in his compensation” (American Memory, Library of Congress 2003). An 1851 coastal chart of the Tybee Island vicinity depicts the lighthouse, the Martello Tower, and the Beacon (Figure 8). No other support buildings are shown on this part of the island.

At the beginning of the American Civil War, Tybee Island Lighthouse was controlled by the United States. On January 2, 1861 Charles Olmstead formed the 1<sup>st</sup> Georgia Regiment in Savannah. The next day three companies (134 men) boarded a steamer in Savannah for Fort Pulaski. The Confederates entered the fort without a fight, there being only two Union soldiers in the fort (Lawrence 1997:11-12). Two nautical charts, both dated 1861, show details of the Tybee Lighthouse complex. A portions of one of these charts is shown in Figure 9.



**Figure 7. Union Troops Approaching the Martello Tower on Tybee Island in 1861.**



**Figure 8. Later 19<sup>th</sup> century Illustration of the Martello Tower at Tybee (King and Champney 1875:375).**

Colonel Olmstead’s 1<sup>st</sup> Georgia Regiment of the Confederacy established a battery on Northern Tybee Island and maintained a string of pickets along Tybee beach. That battery may have been garrisoned by the Montgomery Guards and possibly others. Cartographic evidences indicates that the Confederate battery was located west of the Tybee Lighthouse complex. By April 13, 1861 the Confederate garrison at Fort Pulaski numbered 650 men. In early 1861 elements of Colonel Olmstead’s 1<sup>st</sup> Georgia Regiment built a battery on Tybee Island and established a garrison there. Colonel Mercer described the post at Tybee in the summer of 1861 as pleasant with a, “constant breeze from the sea...broad beach for drill...[and the]...surf bathing was delightful”. Pickets were posted at intervals along the beach (Lawrence 1997:19-20).

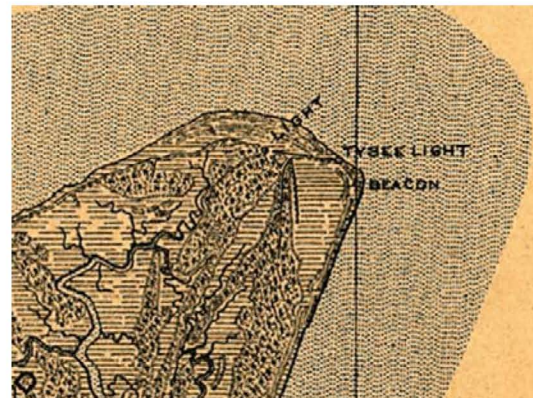
General Robert E. Lee was appointed to command the Department of the Coast of South Carolina, Georgia and Florida on Nov. 5, 1861. Although General Lee would later exhibit great military leadership qualities in the Mid-Atlantic theater, his command while in the Savannah vicinity was less than stellar. General Boggs noted: “There were no active operations undertaken by him; whether for the want of troops and material I do not know. All that was done, was to build batteries at Causton’s Bluff and on Elba Island in the Savannah river” (Boggs 2003:24-25). The Confederate force at Tybee Lighthouse and the Martello Tower, prior to the Union naval attack in late November 1861 was not determined from the present research.



**Figure 11. Portion of Sneden’s Map of Siege of Fort Pulaski, Savannah River, Georgia, 1862 (Sneden 1862).**



**Figure 9. Portion of an 1851 Coastal Chart Showing the Tybee Lighthouse Vicinity (NOAA 2003).**



**Figure 12. Portion of Tybee Island, 1861 (OR, in ehistory.com 2007).**



**Figure 10. Portions of an 1861 Coastal Chart Showing Details of the Tybee Lighthouse and Confederate Battery (NOAA 2003).**

Richardson (1886:10) noted that the Confederates garrisoned at Tybee Island were, “1<sup>st</sup> Georgia Regulars, under command of Major [afterwards Brigadier General] William Duncan Smith. The 1<sup>st</sup> Georgia Regulars garrisoned the Island until 17<sup>th</sup> July, 1861 when they were ordered to Virginia and were relieved by the First Volunteer Regiment of Georgia, under command of Colonel Hugh W. Mercer, subsequently Brigadier General. The island remained thus garrisoned until November 13<sup>th</sup>, 1861, when it was evacuated...The two eight inch columbiads which had been used for its defense were dismantled and transferred to Fort Pulaski”. As observed on the 1861 chart in Figure 8, the Confederate battery was several hundred meters northwest of the Tybee Lighthouse and, consequently, archaeological

evidence of the Confederate troops was not expected in the immediate study area.

Another Confederate military unit associated with Tybee Lighthouse were the Montgomery Guards. The Montgomery Guards were composed of mostly Irishmen from Savannah, Georgia. The Montgomery Guards were commanded by Captain Lamar J. Guilmartin. They were originally formed as an independent company known as Guilmartin’s Battery, Georgia Artillery. They were later known as [Christopher] Hussey’s Battery, Georgia Artillery. This company was temporarily attached to 1<sup>st</sup> Regiment, Georgia Volunteer Infantry, which was commanded by Colonel Olmstead. Olmstead commanded Fort Pulaski at the time of its capitulation. The battle flag of the Montgomery Guards was captured at that time and is currently curated by the National Park Service at the Fort Pulaski National Monument. The Montgomery Guards later became Company E, 22<sup>nd</sup> Battalion, Georgia Heavy Artillery but remained under command of Guilmartin (NPS 2003; Georgia Confederate Units 2003; Griffin 2003). The Montgomery Guards were also associated with the 20th Regiment, Georgia Infantry, where they formed Company K (Spurlock 2003). Although the specific Confederate military company(s) assigned to the battery on Tybee Island in 1861 was not determined from the present research, in all likelihood included the Montgomery Guards. The Tybee battery was described as a “small sand battery” by C. C. Jones, Jr. (1997:97).

In 1861 the Union Navy implemented a blockade of the South Atlantic Coast, which included the mouth of the Savannah River and Tybee Island. A combined Expeditionary Corps of the United States Army and Navy was authorized by the Secretary of War in August 1861. Brigadier General Thomas W. Sherman was placed in command of the Army troops and Flag Officer Samuel Dupont commanded the Naval forces (Cornell University 2003c). On November 24, 1861, Flag-Officer Samuel F. DuPont issued the orders from aboard the Flagship *Wabash* in Port Royal Harbor, South Carolina to Commander J. S. Missroon, *USS Savannah*, which was located offshore from Savannah:

...Lieutenant Commander Ammen, who went in with Commander Rodgers, brought this note and gave me other particulars confirming the report of our

possession of Tybee Island, and acquainting me also with the fact that the enemy has sunk obstructions in the river at Fort Pulaski. You will please, as soon after the receipt of this communication as possible, take the *Savannah* into Tybee entrance and anchor off the light or beacon, hoist the flag on the tower, and protect it from the ship with out keeping a permanent force on the shore...(Cornell University 2003d:325).

Historian Lawrence noted that most of the Confederate troops on Tybee Island had been evacuated following the battle at Port Royal, South Carolina. A small picket remained until November 24, when one Confederate private wrote in his diary, “About ten o’clock, the Yankees commenced to shell us and kept at it for about two hours, when we retreated from the Island under fire of their shells...At forty-five minutes after three p.m., thirteen surf-boats loaded with men landed on the Island, and raised the Stars and Stripes” (Lawrence 1997:40-41). On November 25, Flag-Officer Dupont, Commander of the South Atlantic Squadron, reported on the status of Tybee Island to Gideon Wells, Secretary of the Navy, in which he noted:

**Table 1. Abstract from Return of the Expeditionary Corps...for October 28, 1861.**

Commands	Officers		Men		Aggregate
	For duty	Total	For duty	Total	
Division staff	26		26	25	51
First Brigade	185	192	3,682	3796	3,988
Second Brigade	137	141	3,915	3196	3,337
Third Brigade	147	153	3,574	3,747	3,900
Troops not brigaded	61	62	1,242	1,315	1,377
<b>Total</b>	<b>556</b>	<b>574</b>	<b>11,538</b>	<b>12,079</b>	<b>12,653</b>

...Captain Rodgers was instructed to push his reconnaissance so far as to ‘form an approximate estimate of the force on Tybee Island and of the possibility of gaining access to the inner bar...I was not surprised when he came back and reported that the defenses on Tybee Island had probably been abandoned...The abandonment of Tybee Island, on which

there is a strong martello tower, with a battery at its base, is due to the terror inspired by the bombardment of Forts Walker and Beauregard, and is a direct fruit of the victory of the 7<sup>th</sup>. By the fall of Tybee Island, the reduction of Fort Pulaski, which is within easy mortar distance, becomes only a question of time (Cornell University 2003d:325-326).

Commander Missroon reported back to DuPont that same day stating, "SIR: I have the honor to report that Commander Rodgers landed on Tybee Island at 3 p.m. last evening and hoisted the flag of the Union on the Martello tower and light-house, which were held last night by a boat's crew, by whom numerous camp fires were built to induce a belief that it was held in force..." (Cornell University 2003d:326). On November 25, 1861 Brigadier General T. W. Sherman, Headquarters Expeditionary Corps, U.S. Army, reported to the Adjutant General, "...It has been learned by a reconnaissance sent to the neighboring island that the forts on Tybee Island have been deserted by the rebels, I informed Commodore DuPont of the same, whereupon he yesterday started some gunboats down there, and discovered it to be a fact. We have therefore another light-house, which should be relighted at once" (Cornell University 2003c).

Commander Rodgers recorded this event in his log of the *USS Flag* on November 24,

...At 11:15 commenced firing upon the martello tower on Tybee Island. They fired 16 guns. At 3, beat the long roll, called away all boats armed, sent them in charge of the first lieutenant to join a landing party. The small-arms men landed at 4.03 from the boats and took possession of Tybee Island. The United States flag was hoisted on the martello tower and light-house; boats returned and reported the island deserted by the rebels: A launch's crew had been left ashore under command of Master Phoenix, of the *Pocahontas*, in charge of public property and to light false camp fires. At 9, two very large fires were discovered on the mainland. About fifteen minutes later another large fire showed itself, supposed to be in or about Fort Pulaski (Cornell University 2003d:327).

Lieutenant Balch, Commander of the *USS Pocahontas*, wrote in his ship's log on November 24,

At 10:30 a.m. got underway and stood in toward Tybee light, firing six rounds of X-inch shell and three shell from 32-pounder at fort near Tybee light-house, *Seneca* also firing. At 2:30 p.m., in obedience to a signal from the *Seneca*, lowered and manned all our boats. The boats from all the vessels having stopped at the *Flag*, they pulled ashore and took possession of Tybee Island. At 4.30 we made a signal that a Confederate steamer was coming down but she returned to Fort Pulaski without coming in range. The gig, first and second cutters returned, leaving Messrs. Phoenix and Wiley and the launch and launch's crew on shore to man the battery. From 8 to midnight, camp fires burning brightly on shore. Master Phoenix in charge with the launch's crew and a few marines garrison the fort with howitzers and small arms. The retreating rebels are apparently burning everything in their track. Immense fires are burning in different places (Cornell University 2003d:327).

Lieutenant Ammen, Commander of the *USS Seneca*, also made an entry in his ship's log on November 24, detailing the attack on Tybee Island. He noted, "...When within long range fired with 15 second fuzes on the Martello tower on Tybee Island, firing six of this range, then one 10-second fuze, then two 5-second fuzes from XI-inch pivot guns. We also fired six Parrott rifle shell..." (Cornell University 2003d:327).

Flag-Officer Samuel F. Dupont made a reconnaissance visit to Tybee Island on November 27, which he described to Secretary of the Navy Gideon Welles, "I find the island abandoned by the rebels. I landed with the armed boats from the ships of the squadron and the marines. The light-house is uninjured, except the glass of the lantern is very much broken. The Martello tower will require considerable repairs if occupied for defense" (Cornell University 2003d:364).

The Union Army and Navy captured Tybee Island on November 24, 1861. Shortly thereafter,



a large camp was established in the vicinity of the Tybee Lighthouse. From that base of operation, soldiers were sent to construct a series of batteries and other works that were used in the siege of Fort Pulaski. The closest battery to the Tybee Lighthouse was about a quarter mile distant. Fort Pulaski was captured on April 11, 1862 and thereafter the Union Army controlled the northern Georgia coast. A few miles inland, however, the area continued to be held by the Confederates. The Confederate's grip was not loosened until the arrival of General William T. Sherman's army in December 1864.

Confederate General Robert E. Lee recounted the Tybee Island engagement to J. P. Benjamin, Secretary of War, C.S.A., in which Lee wrote:

SIR: On Sunday last, 24<sup>th</sup> instant, the enemy crossed Savannah Bar with five of his vessels, and made a lodgement on Tybee Island. Subsequently three other vessels joined them, and the force on Tybee Island was reinforced. Five vessels, one of them a frigate, said to be the *Sabine*, now lay inside of the bar north of Tybee Island. They are 3 or 4 miles from Fort Pulaski, within range of whose guns they have not yet approached. The force on Tybee Island is reported to be large, but I am unable to state it. No demonstration of their purpose has yet been made further than the occupation of the island.... (Cornell University 2003d:327-328).

On December 1, 1861, Union Captain Quincy A. Gillmore, Chief Engineer, Expeditionary Corps, reported from Hilton Head, South Carolina to Brigadier General T. W. Sherman of the military situation at Tybee and Cockspar Islands.

Gillmore noted, "Agreeably to your orders I proceeded in the steamer *Ben DeFord*, on the afternoon of the 29<sup>th</sup> ultimo, to Tybee Island, to make a military examination of that locality. We arrived at the Tybee light-house about 7 p.m., when I called upon the senior naval officer present, and made arrangements with him for disembarking my escort (three companies of the Fourth New Hampshire Volunteers, under Major Drew) at 7 o'clock on the following morning" (Cornell University 2003c:193-194). Gillmore noted that the Confederates had established a 100 yard-long parapet on the west end of Tybee Island, opposite Fort Pulaski and these troops

had been camped in, "bush tents", west of the parapet. This parapet defended against an attack from the Tybee Lighthouse vicinity. This earthwork is probably the same as the "battery" shown on the 1861 chart (See Figure 9).

Gillmore reported on his examination of the "old tower [Martello Tower] near the light-house". He described its dimensions, included a sketch of the tower, and noted that it was surrounded by an unfinished Confederate fieldwork, which he noted, "...could with little labor be made a strong position, that would control the entrance to Savannah River, and thus render efficient services to the blockade in case the fleet should be driven off by stress of weather" (Cornell University 2003c:194). Gillmore assessed the position of Fort Pulaski and he recommended a strategy for reducing the fort. Gillmore wrote,

...I deem the reduction of that work practicable by batteries of mortars and rifled guns established on Tybee Island. I think it probable that a nearer position on firm ground (though very shallow, and therefore ill-adapted to mortar and sunken batteries) can be found on the island west of Tybee. I would establish these batteries from 20 to 25 yards apart, one gun or one mortar in each, behind the ridge of sand on the shore, westward from the light-house....There are now probably at Fort Pulaski 700 good troops...It may be their design to land on Tybee and hold the west end of it, to prevent the erection of batteries against the fort. I therefore recommend immediate occupation of Tybee Island by one good regiment until the question of attempting the reduction of Fort Pulaski be determined (Cornell University 2003c:149, 195).

The 46<sup>th</sup> Regiment, New York Volunteers arrived at Tybee Island aboard the steamer *Empire City* after leaving Hilton Head, South Carolina in late November (Cornell University 2003c:189). Lawrence (1997:113) noted that the 46<sup>th</sup> Regiment was composed entirely of Germans. On December 6, 1861, Captain L. H. Pelouze, 15<sup>th</sup> Infantry, wrote to Colonel Rudolph Rosa, Commander of the 46<sup>th</sup> Regiment, New York Volunteers:

COLONEL: The commanding general directs that you take post with your

regiment on North Tybee Island with as little delay as practicable, and at once take up a defensive position, so as to hold the entire island. Your men will occupy as quarters the buildings near the light-house, and you will establish a camp on the clear ground near the light-house, always keeping your pickets at the salient points of the island. Your attention is particularly called to the narrow neck of land west of the light-house, as a point which should always be guarded. The work thrown up by the enemy at this point [that parapet previously described by Captain Gillmore] should be torn down to the ground as soon as possible, and, to avoid the effects of the fire from Fort Pulaski, this should be done in the night. You must take every precaution against being surprised, and in the mean time take particular care that the works thrown up about the light-house are not injured or defaced in any way, as guns are to be mounted in them as soon as they can be got there. You will take particular care of your supplies, and see that they are not in any way wasted or destroyed. You will see that vessels sent there are unloaded as soon as possible and sent back to this place. You will keep these headquarters informed of all passing events (Cornell University 2003c:196).

When the Union Army launched an offensive against Fort Pulaski, Tybee Island served as a landing and unloading site, a headquarters complex, and as the site for a series of 11 artillery batteries that were used to reduce the Confederate fort. Construction of the Union batteries began in early 1862. The Tybee Island Lighthouse was beyond the range of the heavy ordnance in Fort Pulaski and the Union artillery batteries were located closer to Fort Pulaski.

Gillmore stated that, “A depot powder magazine, of 3,600 barrels capacity, was constructed near the Martello Tower, which was the landing-place for all the supplies” (Gillmore 1862:24).

Sometime prior to April 1, 1862 (and possibly in late November 1861) the Montgomery Guards, a company led by Captain Guilmartin, who formed part of the 1<sup>st</sup> Georgia Regiment under Colonel

Olmsted, torched the Tybee Lighthouse, which resulted in the destruction of its interior and upper section. Although Flag Officer DuPont upon his first inspection declared the lighthouse to be, “...uninjured, except that the glass of the lantern is very much broken”, he later described the condition of the lighthouse at Tybee Island in less optimistic terms, “...the tower is standing, but the interior was burned and the lantern much injured. It is presumed the lens was taken to Savannah” (Cornell University 2003a). The lower 64 feet of the tower, which was constructed of brick, remained standing. A contemporary drawing and photograph of the damaged lighthouse attest to this event. [Figure 11](#) is a portion of Robert Sneden’s watercolor map of Tybee Island in 1862 (Sneden 1862). [Figure 12](#) shows an unattributed contemporary illustration of the Montgomery Guards destroying the lighthouse at Tybee Island. The original caption for this illustration read, “Tybee Island, Savannah River, Ga- View of the Lighthouse and Barracks, Destruction of the Lighthouse by the Confederates” (Savannah Images Project 2003; Thomas Gamble Collection n.d.). The raid by the Montgomery Guards may have also resulted in the destruction of the associated Union garrison at Tybee Lighthouse (NRHP 1982).

On February 19, 1862, Gillmore was ordered by Brigadier General Sherman to Big Tybee Island to place it, “in a thorough state of defense against approach from Wilmington Narrows and Lazaretto Creek, to prevent all approach by water, and blockade the channel”. Gillmore noted that this action completed the investment of Fort Pulaski and the bombardment of the fort began immediately (Cornell University 2003c:153-154).

On February 22, 1862, two companies of the 46<sup>th</sup> Regiment, New York Volunteers were repositioned from their post at Tybee Lighthouse to a battery on Decent Island, Lazaretto Creek. Eighteen of those men were later captured by the Confederates. Captain Hinckel led one of these companies, whose men manned the small post at Lazaretto Creek for eight weeks prior to the siege (Cornell University 2003c:154, 160). The location of the Union battery at Lazaretto Creek has not been determined. The mouth of Lazaretto Creek is several miles west of the study area.

The Union troops posted at Tybee Island from November 21 to April 9, 1862 included the 7<sup>th</sup>

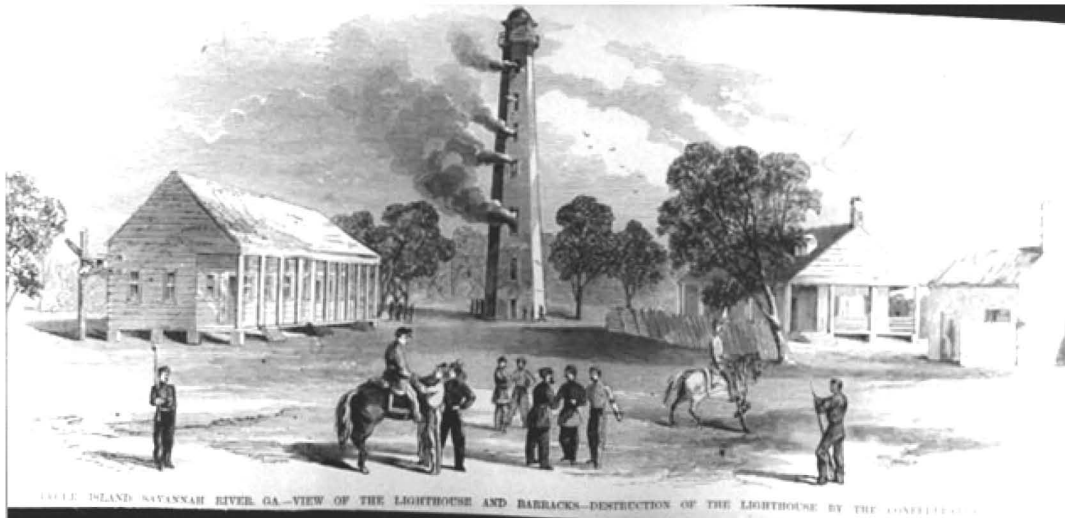
Regiment, Connecticut Volunteers; 46<sup>th</sup> Regiment, New York Volunteers [minus the two companies described above]; two companies of the Volunteer Engineers, 46<sup>th</sup> Regiment New York, and; two companies of the 3<sup>rd</sup> Regiment, Rhode Island Volunteer Artillery (Cornell University 2003c:154).

The 46<sup>th</sup> Regiment, New York Volunteer Infantry, led by Colonel Rudolph Rosa, was assigned to the First Brigade, under Brigadier General Egbert L. Viehle, of the Expeditionary Corps. The 7<sup>th</sup> Connecticut Volunteer Infantry, led by Colonel Alfred H. Terry, was assigned to the Third Brigade, under Brigadier General Horatio G. Wright. The 1<sup>st</sup> New York Engineers, led by Colonel Edward W. Serrell; the 3<sup>rd</sup> Rhode Island Artillery, led by Colonel Nathan W. Brown and the 3<sup>rd</sup> U.S. Artillery, Battery E, led by Captain John Hamilton formed a part of T. W. Sherman's Expeditionary Corps that was not brigaded (Cornell University 2003c:185).

The 46<sup>th</sup> Regiment, New York Volunteer Infantry had traveled south aboard the steamer *Webster* (later transferring to the steamer *Empire City*); the 7<sup>th</sup> Connecticut Volunteer Infantry aboard the steamer *Illinois*; the 3<sup>rd</sup> Rhode Island aboard the steamer *Cahawba*, and the Volunteer Engineers (from Fort Monroe) aboard the steamer *Star of the South* (Cornell University 2003c:179).



**Figure 13. Photographic View of Tybee Lighthouse, 1861 (Savannah Images Project 2003).**



**Figure 14. Confederate Soldiers Set Fire to the Lighthouse at Tybee (Thomas Gamble Collection, Savannah Public Library n.d.).**

When originally mustered the 46<sup>th</sup> New York consisted of 672 men; the 7<sup>th</sup> Connecticut of about 1,000 men. By the end of the war the 46<sup>th</sup> Regiment had lost 195 men, including 10 officers and 185 enlisted men (91 of them died from disease). Consequently, the number of Union troops at Tybee Island in late 1861 and early 1862 probably numbered over 2,000 men. Quarters for an army of this size would have been considerable. All of the military units who

got an early taste of war at Tybee Island and Fort Sumter went on to fight other battles and suffered considerable losses. The 7<sup>th</sup> Regiment lost 364 men in the war, including 15 officers and 349 enlisted men (196 from disease). The 3<sup>rd</sup> Rhode Island lost 135 men in the war, including 6 officers and 129 men (94 from disease). the 1<sup>st</sup> New York Engineers lost a total of 148 men, including 7 officers and 141 enlisted men (121 from disease) (NPS 2003).

Extracts from a summary of the activities of the 3<sup>rd</sup> Regiment, Rhode Island Volunteer Heavy Artillery are presented below:

October 12th the Regiment embarked on the steamship 'Cahawba' and proceeded to Fortress Monroe, where the military and naval forces were gathering under Gen. Thomas W. Sherman and Commodore Samuel F. Du Pont, preparatory to a descent upon the coast of South Carolina. Here the Regiment was encamped until the 23d, when it again embarked upon the same steamer, but was destined to wait another week before the expedition was ready to set sail. While in camp at this place, the Regiment exchanged its uniform of gray for that of the Union Blue, and companies A and C received Whitney rifles with sabre bayonets in exchange for their Enfield muskets. October 29th the expedition got under way, seventeen war vessels with thirty transports and supply vessels, and on board the "Expeditionary Corps" of Gen. Sherman, consisting of 12,653 officers and men... Tybee Island had been occupied early in the preceding December, and from February 21 to April 9, 1862, the batteries upon the island were constructed and equipped as fast as the ordnance arrived from the North. As in the case of the erection of the batteries on the upper river, this labor was of the most fatiguing character. Company F, under Capt. Mason and Company H, under Capt. Rogers, participated in this work. Company B, under Capt. Tourtellott, arrived April 7th, and the three companies were assigned to batteries as follows: Co. B, to Battery Lyon, 3 ten-inch columbiads, 3100 yards distant from the wall of the fort, under Capt. Tourtellott; Battery Lincoln, 3 eight-inch columbiads, 3045 yards distant, under Lieut. Albert E. Greene; Co. F, Battery Scott, 3 ten-inch columbiads and one eight-inch columbiad, 1740 yards distant, under Capt. Mason; Co. H, Battery McClellan, 2 eighty-four-pounder James rifles and 2 sixty-four-pounder James rifles, 1650 yards distant, under Capt. Rogers. Thus nearly all the breaching batteries were manned by this Regiment; of the seven other batteries, six were equipped with

mortars, and most of them at great distance. There were, in all, 16 mortars and 20 guns in the batteries on this island, and 14 of the latter were served by the above companies (Department of Rhode Island, Sons of Confederate Veterans 2003).

Following the capitulation of Fort Pulaski by the Confederates, elements of the 3<sup>rd</sup> Regiment, Rhode Island Heavy Artillery and the 7<sup>th</sup> Connecticut Volunteers remained in the Savannah River region for some time:

Company B was stationed for a month in the captured fort to instruct the Seventh Connecticut in the use of heavy guns. Four men of this company, Sergt. George J. Hill, John A. Gorton, Michael I. Gibbens and Joseph T. Luther, were killed April 14th by the explosion of a shell which they were emptying, and Charles Morgan mortally wounded. April 16th a detachment of sixteen men from Co. F, under Lieut. Augustus W. Colwell, accompanied a reconnoitering expedition of 400 men under Lieut. J. H. Wilson, to Wilmington Island. In a sharp engagement with 800 of the enemy, the Union force lost 10 killed and 36 wounded, of whom some were of Co. F, which manned a six-pounder gun on the steamer 'Honduras.' All the companies on the Savannah, except Co. B, returned soon after to Hilton Head, and in May, Co. B was replaced in the fort by Co. G, which remained there until May, 1864 (Department of Rhode Island, Sons of Confederate Veterans 2003).

Gillmore noted that these troops were, "constantly engaged in landing and transporting ordnance, ordnance stores, and battery materials, making fascines and roads, constructing gun and mortar batteries, service and depot magazines, splinter and bomb proof shelters for the relief of the cannoneers off duty, and drilling at the several pieces. In all, 36 heavy artillery pieces were distributed in 11 batteries in the marshes west of Tybee Lighthouse (Cornell University 2003c:154). Of the 11 Union batteries that were constructed for the siege on Fort Pulaski, Battery Stanton was nearest to the Tybee Lighthouse, being approximately 1,400 yards distant (NPS 2003; Anderson 1995). If these batteries were permanently garrisoned, it was probably with a

“skeleton” crew. Orders issued by Brigadier General Gillmore on April 9, 1862 began with the statement, “The batteries established against Fort Pulaski will be manned and ready for service at break of day to-morrow...” (Cornell University 2003c:156).

The published records of the Civil War for the period from 1863 to 1865 contain very few references to Tybee Island and no references to any Union garrison at that place. On December 13, 1864, Rear Admiral John A. Dahlgren wrote from Tybee Roads ordering Lieutenant Commander Young to facilitate communication with the U.S. Army, and Dahlgren noted: “A communication by signal should be established without delay between Wassaw and Tybee and Ossabaw [Islands] (Cornell 2003a: Volume 16, 130-131). On December 27, 1864, Major General William T. Sherman wrote to Captain Boutelle, of the U. S. Coast Survey, stating, “I have the honor to request that you will, at the earliest practicable moment, take the necessary steps to have the Tybee Light-House rebuilt, put in good order, and relighted; and also that the channels leading up to Savannah be buoyed and lighted as soon as possible...” (Cornell University 2003b:821).

An 1864 nautical chart of Wassaw Sound included details of the improvements on the north end of Tybee Island in the vicinity of the lighthouse. The Tybee Lighthouse is not identified on this chart, although a cluster of three buildings, which are organized along a rectangular plan, is shown, as well as a cruciform enclosure or compound, northeast of these buildings. The “Tybee Beacon” is shown on the 1864 chart, near the shore and east of the building cluster. The absence of the Tybee Lighthouse on the 1864 chart may indicate that it was a nonfunctioning facility, having not yet been rebuilt since its 1862 destruction. The “Tybee Light” is shown on an 1867 chart, which also includes the “Beacon” and the aforementioned cruciform compound, northeast of the lighthouse (NOAA 2003).

Some elements of the Union Army continued to occupy the Tybee Lighthouse vicinity, possibly into 1867 when reconstruction of the Tybee Lighthouse was completed. The exact date of departure of the U.S. Army troops from Tybee Island was not determined from the present research.

Five acres at the Tybee Lighthouse complex were deeded to the U.S. Coast Guard in 1865 for use as a Coast Guard life boat station (NRHP 1982:8). In 1866, the U.S. Congress authorized \$20,000 for construction of a new brick and cast iron lighthouse on Tybee Island, which utilized the existing lower 60 feet of the old 1773 brick tower. Construction of the lighthouse was hampered by a cholera epidemic and cost overruns of \$34,443. The revamped Tybee Lighthouse, as well as a new keeper’s dwelling, was completed by October 1867. During this reconstruction, an unnamed account stated that the tower, “...was torn down to the proper point and new masonry carried up to the required weight” (NRHP 1982). This lighthouse, which has undergone various minor changes since 1867 today looms 145 feet from its base to the top, and is visible up to 18 miles offshore (Totton 2000).

Surgeon William Carroll, United States Volunteers attended to the victims of the cholera epidemic on Tybee Island. The cholera epidemic occurred in late August 1866. Carroll was promoted to the rank of Brevet Lieutenant Colonel as a result of his “faithful services” during the epidemic, as noted in the Senate Executive Journal of December 14, 1866 (American Memory, Library of Congress 2003). Although these records suggest that a sizeable force was present at Tybee Island, sufficient in numbers for a cholera outbreak, their identities and associated military units are presently undetermined. Disease had also been a problem in the area during previous years. Records of the 48<sup>th</sup> Regiment, New York Volunteers list six Union soldiers who died of disease at Fort Pulaski in 1862 (Beck 2001). These deaths occurred in April (N=1), June (N=3), and September (N=2) of that year.

By 1867, the conditions at Tybee Island were returning to normal. After the repairs and improvements to the lighthouse were completed, the size of the Union garrison at Tybee Lighthouse was probably significantly reduced, or removed. The salary of the lighthouse keeper at “Tybee Island Knoll” was established by the U.S. Congress on March 2, 1867 not to exceed \$600.00 (American Memory, Library of Congress 2003).

A violent storm struck Tybee Island in 1881 causing considerable damage (Richardson 1886:18). The U.S. Congress authorized funds

for construction of a new keeper's dwelling that same year. Figure 15 is a view of the Tybee Lighthouse complex in the 1880s. In 1885 a fire destroyed one of the keeper's dwellings and a new Assistant Keeper's residence was built on the same site. This building served as the Assistant Keeper's dwelling until 1933, when that job position was discontinued (George B. Jackson served as the lighthouse's only keeper from 1933 to 1947).



**Figure 15. Tybee Lighthouse, 1880s (The Drudi Lot Lies in the Distance near the Photo's Center).**

In 1890 the land surrounding the lighthouse was developed as a U.S. Army military post, named Fort Screven. This post had been authorized by Congress as early as 1786 and by 1808 the federal government had acquired property for this purpose on Tybee Island. Title to the property was not secured until 1875, however, and construction of Fort Screven began in 1890. The fort consisted of a series of separate concrete artillery batteries that guarded the coast from a sea invasion at strategic points. One of these batteries, Battery Gardner, is located east of the Tybee Lighthouse complex and presently serves as a museum exhibit hall. Fort Screven was manned until 1945 when it was declared surplus and sold to the City of Savannah Beach. Figure 16 shows the Tybee Lighthouse vicinity in 1923.



**Figure 16. Tybee Lighthouse, 1923.**

### Previous Research

Archaeological research on Tybee Island has been very limited. Historical interest in the general vicinity was stimulated in the 1930s by plans for the development of a national park at Fort Pulaski on neighboring Cockspar Island. Sadly, interest in the archaeology of Tybee Island was lacking.

An archaeological survey was conducted by the University of Georgia in 1978 for a proposed parking lot, east of the Tybee Lighthouse. This survey, which searched for aboriginal sites, resulted in negative findings. Their survey included shovel tests spaced at 100 meters along the proposed road and three shovel tests along the length of the proposed parking lot in front of the museum. Although Pearson concluded that the survey revealed no cultural material, he noted that the, "...shovel tests in [the] parking lot encountered a layer of soil composed of shell, coal and clay at 10 to 25 cm". This zone was interpreted as fill from the leveling of the present parking lot or in connection with earlier construction of Fort Screven." This historic fill zone was not recorded as an archaeological site by Pearson (Pearson 1978:89).

A cultural resources study was prepared as part of the U.S. Army Corps of Engineers' Tybee Island Beach Erosion Control Project in 1979 (Marks 1979). That document included preliminary historical information on the lighthouse and the keeper's residences. The lighthouse was described as a 150 foot tower dating from 1790 and 1867, and the age of the keeper's cottages was estimated at, "as early as 1860-1870 and as late as 1890s" (Marks 1979:2). Marks (1979:35) provided this description of the Keeper's cottages at the Tybee Lighthouse:

A comparison of the present plan of the lighthouse complex with an historic view of the Tybee Lighthouse, during its burning by Confederate soldiers in 1862, indicates many similarities. The existing cottages are grouped with the lighthouse, as the fourth element, to form an open space or quadrangle between the buildings.

The cottage to the north and the long rectangular building to the south are in the same general position today as the arrangement shown in the 1862 view. Some of the outbuildings present today also appear to be in the general location of outbuildings shown in the historic view. Whether there is any connection of the existing plan or building with an earlier military or garrison use is not presently known. Because of the close proximity of the lighthouse complex to the Federal batteries firing on Fort Pulaski and the strategic military significance of this site to the blockade of the Port of Savannah it is possible that the present plan and some of the buildings are a reflection of an earlier Confederate or Union military installation on this site (Marks 1979:35-36).

The Tybee Lighthouse complex was included in the Fort Screven National Register Historical District (NRHD), which was listed by the National Register of Historic Places in 1982 (NRHP 1982, Reference 82002393). The nomination identified the Lighthouse, Assistant Keeper's House, Keeper's House, Barracks, Summer Kitchen and three other small buildings in the Lighthouse Reserve as contributing to the historical significance of the NRHD. The lighthouse complex (including the 5 acre reserve) is entirely within the NRHD boundary. Fort Screven covered approximately 205 acres, including the five acre Coast Guard station.

The archaeological components of Fort Screven and the Tybee Island Lighthouse complex were not considered in the 1982 NRHD nomination package. At that time the archaeological resources associated with these sites were not known. Larry Babits (personal communication,

April 7, 2003) conducted limited investigations at Tybee Lighthouse in the early 1990s when a line of fence posts was excavated around the lighthouse museum compound. Although no archaeological report of this work was compiled, Babits provided this description of his field methods: "...we used the line of post holes for a new fence as test pits and screened them all. I can't remember the directions but there was a concentration of material on the inland/mainland side that included some burned debris". Archaeological collections from Babits' work are curated at the Tybee Lighthouse Museum where they await more detailed study and description.

The Federal government focused attention on the archaeological resources at nearby Fort Pulaski in the 1990s in a series of management studies (Brewer and Cornelison 1997; Groh 1999, 2000; Jameson 1997). Archaeological exploration in the early 1990s by National Park Service archaeologists was conducted at Battery Halleck, a Union artillery battery that was used in the investment of Fort Pulaski (Anderson 1995). This study resulted in the location of architectural features and debris associated with the Federal battery. The report also contains an appendix of primary Civil War-era correspondence pertaining to the capture of Fort Pulaski. While the Battery Halleck study was important in identifying the structure of a Federal battery from 1862, only minimal information was generated on the material culture associated with the occupation. The low frequency of related refuse may be attributable to the relatively short period of time that the battery was in use.

Remote sensing studies were conducted offshore to identify any submerged cultural anomalies (Watts 1998). Historic structures that are potentially submerged archaeological sites include the first two sites for the Tybee Lighthouse and the Martello Tower, which was a fortified tabby tower, used to defend the entrance to the Savannah River during the 19<sup>th</sup> century.

The Tybee Island Light House served as a functioning navigational aid that was operated by the United States Coast Guard. Until the late 1980s when the property was transferred to private hands. The Tybee Lighthouse was then decommissioned and the property was transferred to the Tybee Island Historical Society. A newer Coast Guard Lighthouse station is located on Cockspur Island. Once it

acquired the historic Tybee Lighthouse, the Tybee Island Historical Society wasted no time in effecting its repair. This restoration project included repair of more than 5,000 feet of Savannah gray brick and replacement of aluminum windows with more historically accurate bronze windows. The restoration work by Kenneth Smith Architects, Inc. and the International Chimney Corporation was based on original drawings and photographs.

Archaeological and historical research at other lighthouses and coastal Civil War military sites in the Southeastern United States were reviewed for this report (Legg and Smith 1989; Trinkley et al. 1999; Kagerer 1985; Totton 2000). Related studies include research by Brockington & Associates at the historic lighthouse at Pensacola, Florida and work by the South Carolina Institute of Archaeology and Anthropology at the Union Army Civil War encampment on Folly Beach, South Carolina (Legg and Smith 1989). The situation at Pensacola was strikingly similar to that of Tybee, where an early lighthouse was later modified for use as a military fort and campsite. Their excavations and analysis at Folly Beach revealed unknown aspects of maritime and military life in this type of coastal environment. The Folly Beach example provides a good parallel for the situation at Tybee Lighthouse. Legg and his colleagues were able to link historical records, including personal accounts, maps, and photographs to the archaeologically defined Union Army camp and cemetery.

Archaeological test excavations were conducted underneath the Assistant Lightkeepers' House at Tybee Lighthouse in 2003 (Elliott 2005). These excavations revealed a dense deposit of Civil War-era debris and a light scattering of artifacts from earlier periods. Elliott's findings supports the historical documentation of extensive U.S. Army occupation of the Tybee Lighthouse vicinity during the Civil War. This research effort also resulted in a compilation of many historical facets about the study area, which are liberally borrowed for this report.



### III. Methods

Historical research for the present study consisted of a review of relevant published histories and biographies. No primary archival research, other than research at the Georgia Archaeological Site Files, Athens, and the Georgia DNR Historic Preservation Division, Atlanta, was undertaken.

Important sources for the Colonial and American Revolution period included (American Memory, Library of Congress 2003; Wright 1873; Bennett and Lennon 1991; Hough 1975). Sources consulted for the American Civil War period included (Beck 2001; Beers 1986; Boggs 2003; C. C. Jones 1997; C. E. Jones 1999; Cornell University 2003a-d; cwbullet.com 2003; Davis 1882, 1885; Davis et al. 1894; Department of Rhode Island, Sons of Confederate Veterans 2003; Dyer 1979; Georgia Confederate Units 2003; Gillmore 1862; Griffin 2003; Hawes 1964; Henderson 1964; Lawrence 1997; Legg and Smith 1989; Lord 1980; Olmstead 1879; Sifakis 1995) and others. General histories of Savannah, Chatham County, and Tybee Island also were consulted and these included Harden (1913), the Thomas Gamble collection (Live Oak Public Libraries 2003), and Richardson (1886).

The GPR field survey was conducted on the Drudi Lot on October 28, 2007. The survey was conducted by a two-person crew from The LAMAR Institute (Dan and Rita Elliott), assisted by Frank Drudi. Figure 17 shows the survey in progress. The Drudi Tract was recorded in the Georgia Archaeological Site File (GASF) as Site 9CH1208. Approximate lot boundaries for 9CH1208, given as UTM Coordinates (NAD 27, Zone 17) are:

<b>Easting</b>	<b>Northing</b>
514520	3543019
514516	3542998
514541	3542996
514561	3543027

Ground Penetrating Radar, or GPR, uses high frequency electromagnetic waves to acquire subsurface data. The device uses a transmitter antenna and closely spaced receiver antenna to detect changes in electromagnetic properties beneath them. The antennas are suspended just above the ground surface and the antennas are

shielded to eliminate interference from sources other than directly beneath the device. The transmitting antenna emits a series of electromagnetic waves, which are distorted by differences in soil conductivity, dielectric permittivity, and magnetic permeability. The receiving antenna records the reflected waves for a specified length of time (in nanoseconds, or ns). The approximate depth of an object can be estimated with GPR, by adjusting for electromagnetic propagation conditions.

The GPR sample blocks in this study area were composed of a series of parallel transects, or traverses, which yielded a two-dimensional cross-section or profile of the radar data. These samples are called radargrams. This two-dimensional image is constructed from a sequence of thousands of individual radar traces. A succession of radar traces bouncing off a large buried object will produce a hyperbola, when viewed graphically in profile. Multiple large objects that are in close proximity may produce multiple, overlapping hyperbolas, which are more difficult to interpret. For example, an isolated historic grave may produce a clear signal, represented by a well-defined hyperbola. A cluster of graves, however, may produce a more garbled signal that is less apparent.



**Figure 17. GPR Survey in Progress on the Drudi Lot, Facing Northeast.**

The GPR signals that are captured by the receiving antenna are recorded as an array of numerals, which can be converted to gray scale (or color) pixel values. The radargrams are essentially a vertical map of the radar reflection off objects and other soil anomalies. It is not an actual map of the objects. The radargram is produced in real time and is viewable on a computer monitor, mounted on the GPR cart.

GPR has been successfully used for archaeological and forensic anthropological applications to locate relatively shallow features, although the technique also can probe deeply into the ground. The machine is adjusted to best probe to the depth of interest by the use of different frequency range antennas. Higher frequency antennas are more useful at shallow depths, which is most often the case in archaeology. Also, the longer the receiving antenna is set to receive GPR signals (measured in nanoseconds, or ns), the deeper the search.

The effectiveness of GPR in various environments on the North American continent is widely variable and depends on solid conductivity, metallic content, and other pedo-chemical factors. Generally, Georgia's coastal soils have moderately good properties for its application.

GPR signals cannot penetrate large metal objects and the signals are also significantly affected by the presence of salt water. Although radar does not penetrate metal objects, it does generate a distinctive signal that is usually recognizable, particularly for larger metal objects, such as a cast iron cannon or man-hole cover. The signal beneath these objects is often canceled out, which results in a pattern of horizontal lines on the radargram. For smaller objects, such as a scatter of nails, the signal may ricochet from the objects and produce a confusing signal. Rebar-reinforced concrete, as another example, generates an unmistakable radar pattern of rippled lines on the radargram. Larry Conyers notes: "Ground-penetrating radar works best in sandy and silty soils and sediments that are not saturated with water. The method does not work at all in areas where soils are saturated with salt water because this media is electrically conductive and 'conducts away' the radar energy before it can be reflected in the ground" (Conyers 2002).

GPR has been used to a limited extent on archaeological sites in Georgia yielding mixed results. Thomas and his colleagues employed GPR technology in his study of the Guale Spanish mission on St. Catherines Island, Georgia in the early 1980s (Royce Hayes personal communication May 31, 2006). More recently, the LAMAR Institute team has conducted GPR survey with good results on several of Georgia's barrier islands, including Jekyll, Ossabaw, Sapelo, St. Catherines and St. Simons islands. In the period since the early GPR work at St. Catherines Island, advances in software imaging have substantially increased the value of this technology in identifying subsurface features.

GPR is particularly well suited for the delineation of historic cemeteries. Historic graves are often easy to recognize in radargrams, as evidenced by a pronounced hyperbola. When 3-D slices intersect these hyperbolas the graves are usually clearly evident in plan view. When a series of graves are closely spaced, however, the grave radar "signature" is less clear-cut. By slicing the radar data at various depths along the hyperbola, the aerial perspective can be refined for optimal viewing and recognition. Since not all graves were dug to the same depth, 3-D slices at different depths can often yield very different views of graves in plan by varying the slice only a few centimeters. The GPR signature for aboriginal features on the Georgia coast has not been fully established. The current work is an important attempt towards characterizing aboriginal features with GPR technology.

Using the same RAMAC X3M GPR system as that used in the present study, Elliott has conducted several GPR studies of 18th and 19th century archaeological sites in coastal Georgia. The first study was at the New Ebenezer town site in Effingham County, Georgia (Elliott 2003a). The results of the GPR work at New Ebenezer were quite exciting and included the delineation of a large portion of a British redoubt palisade ditch and the discovery of several dozen previously unidentified human graves (both within and beyond the known limits of the Jerusalem Lutheran Church cemetery). More recently, GPR survey was conducted by Elliott and his colleagues, at Fort Morris and Sunbury Cemetery (Liberty County), Sansavilla Bluff (Wayne County), Woodbine Plantation cemetery (Camden County), and Garden Homes [Waldburg Street, Savannah] (Chatham

County), the Gould-Bethel Cemetery (Chatham County), Bullhead Bluff Cemetery (Camden County), Fort Saint Andrews (Camden County) and numerous other sites with satisfactory results (Elliott 2003b; 2004; 2006).

The equipment used for this study consisted of a RAMAC/X3M Integrated Radar Control Unit, mounted on a wheeled-cart and linked to a RAMAC XV11 Monitor (Firmware, Version 3.2.36). A 500 megahertz (MHz) shielded antenna was used for the data gathering. MALÅ GeoScience's Ground Vision (Version 1.4.5) software was used to acquire and record the radar data (MALÅ GeoScience USA 2006a). The radar information was displayed as a series of radargrams. Easy 3D software (Version 1.3.3), which was developed by MALÅ GeoScience (2006b), was used in post-processing the radar data and 3-D imaging. This entailed merging the data from the series of radargrams for each block. Once this was accomplished, horizontal slices of the data were examined for important anomalies and patterns of anomalies, which were likely of cultural relevance. These data were displayed as aerial plan maps of the sample areas at varying depths below ground surface. These horizontal views, or time-slices, display the radar information at a set time depth in nanoseconds. Time-depth can be roughly equated to depth below ground. This equivalency relationship can be calculated using a mathematical formula. An estimated soil velocity of 98 (an approximate value for dry sand) was used to generate the GPR maps in this report.

Various adjustments to the GPR equipment were made in the field during the data collection phase. The time window that was selected allowed data gathering to focus on the upper 1.5 meters of soil, which was the zone most likely to yield archaeological deposits. Additional filters were used to refine the radar information during post-processing. These include adjustments to the gain. These alterations to the data are reversible, however, and do not affect the original data that was collected. This same combination of GPR equipment and radar imaging software was used previously in coastal Georgia with very satisfactory results (Elliott 2003a, 2003b; Rita Elliott et al. 2002).

## IV. Results

The LAMAR Institute completed a preliminary archaeological investigation of the Frank Drudi tract on Tybee Island, Georgia in October 2007.

The location of this study (25 Taylor Street) is a vacant lot, shown highlighted in orange in Figure 19.



Figure 18. Aerial View of Drudi Tract, 9CH1208, Shown in Orange (Sagis.org 2007).

### The Drudi Objects

Landowner Frank Drudi discovered three curious objects from his property on Taylor Street.

These artifacts began to appear after his neighbor Jeff Cramer dug a large excavation on the property immediately to the south of Drudi's tract. The excavation was for Cramer's swimming pool and it extended approximately 8



feet beneath the ground surface. Another shallower excavation (approximately 3 feet deep) was dug by the Mr. Cramer along the property border with Drudi, prior to construction of a

fence. The three objects, which were named Drudi Objects 1, 2, and 3 by the author, are shown in Figure 20.



**Figure 19. Drudi Objects (From Left to Right 1, 3, and 2).**

Drudi Object 1 was the first object discovered by Frank Drudi. It is a thick gray oval specimen, which exhibits blade marks from heavy machinery scraping on its bottom surface. It also

has a rectangular indentation on its bottom surface. Figure 21 shows a close-up of Drudi Object 1.



**Figure 20. Drudi Object 1.**

Approximately one year later Mr. Drudi discovered two additional objects on his property that were similar to the first. Both were oval.

Figure 22 shows a close-up of Drudi Object 2. This object was the smallest in diameter of the three specimens.



**Figure 21. Drudi Object 2.**

Figure 23 shows a close-up of Drudi Object 3. It was the largest in diameter of the three objects. It is heavily cracked as a result of dessication. The

radiocarbon samples and petro-chemical samples were taken from this specimen.



**Figure 22. Drudi Object 3.**

All three of the Drudi Objects are stamped on the side with a motif. The motif consists of a cross with rounded lobes and each quadrant formed by the cross contains a single letter. These letters are “S”, “O”, above “C”, and “G”. The cross is surrounded by a circular field and beyond that is a rectangular field. All of these stamps were deeply executed when the material was still quite malleable.

Based on a cursory visual inspection of all three objects, the raw material composition appears to be a combination of tar or asphalt, vegetal matter (grass or moss), and sand. A small scrap sample from one of the objects was heated with a flame and it gave off an odor similar to steaming asphalt. Upon the advice of archaeologist Mark Newell, Mr. Drudi submitted a sample from Drudi Object 3 to Beta Analytic, Inc. for radiocarbon dating. The resulting date was in excess of 30,000 years. While this date is far too old to serve as an indication of the manufacture date for this object, the C-14 date may provide

some clues as to the object’s composition and place of origin.

### GPR Survey

The GPR survey of the Drudi lot was completed without any significant obstacles or problems. The results were used to create a series of plan view maps using Easy3D software. Figure 24 is a GPR plan view of the Drudi Lot, viewed at approximately 75 cm below ground. Taylor Street runs parallel to the left margin of this figure and the Tybee Lighthouse property is located on the northeast side. Grid North is approximately 8 degrees West of Magnetic North. A very large sub-rectangular anomaly is visible in this plan view. It measures approximately 35 m North-South by 30 m East-West. Numerous other strong GPR anomalies are visible within the larger anomaly.

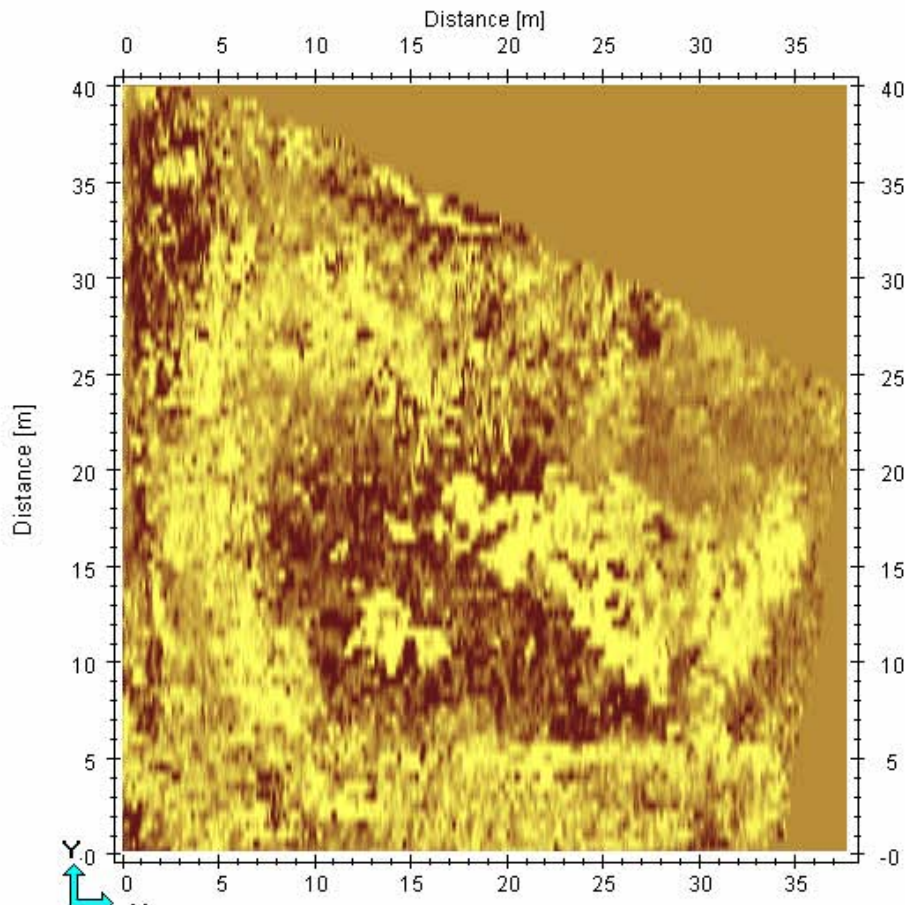
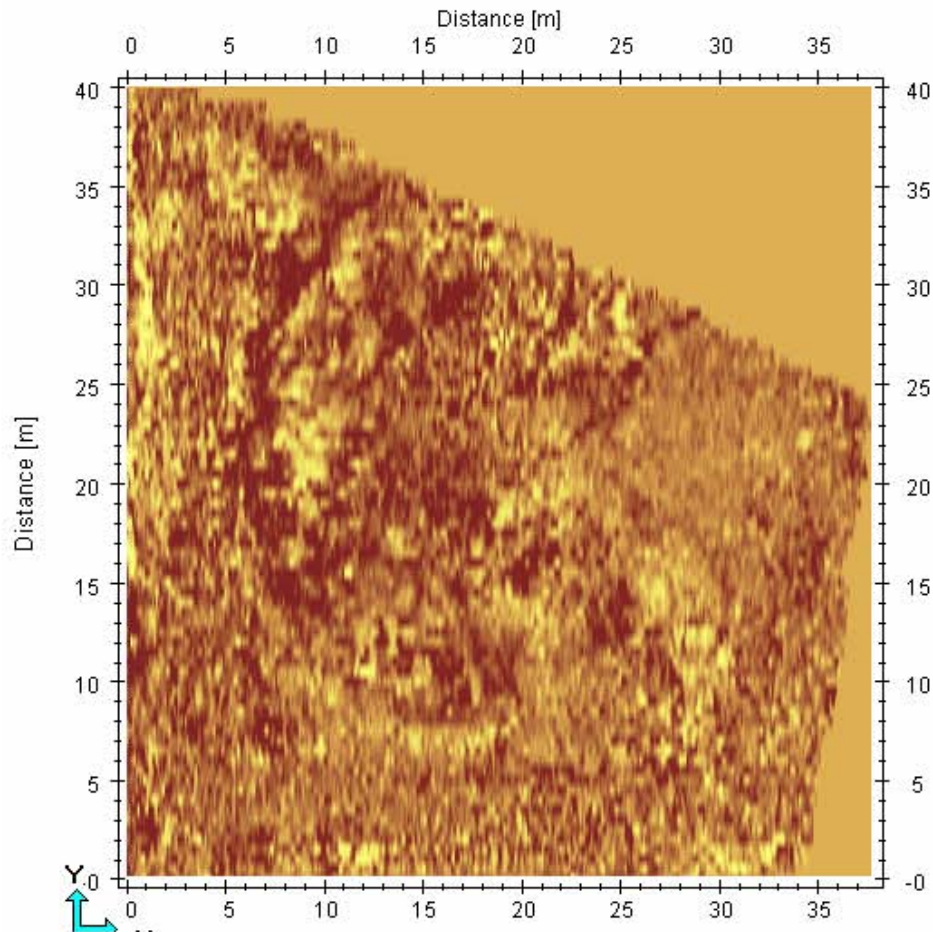


Figure 23. GPR Plan View of Drudi Lot at 75 cm Depth.



Figure 25 is a GPR plan view of the Drudi Lot, viewed at approximately 1 m below ground. A large oval anomaly is prominent in this view. It measures approximately 30 m North-South by 20 m East-West. This oval anomaly is a curious

subsurface feature that deserves additional archaeological scrutiny.



**Figure 24. GPR Plan View of Drudi Lot at 1 m Depth.**

### Shovel Test Survey

The GPR survey was followed by a systematic shovel test survey of the Drudi Lot, which was completed on February 28, 2008. This consisted of the excavation of 12 shovel tests, which were spaced at 10 intervals on a rectangular grid (Figure 25). The shovel test grid had the same orientation as the GPR grid, which was perpendicular to Taylor Street. The shovel tests measured approximately 30 cm by 50 cm in size.

All of the shovel tests contained cultural material. The artifacts from the shovel tests are

summarized in Table 2. The findings from each test are described in the following.

Shovel Test 1 was located at the northeast corner of the Drudi Lot, 35 m (grid) East of the site datum. This test yielded one pebble and one oyster shell at 40-80 cm depth. Soils consisted of:

- 0-28 cm, light yellow brown sand;
- 28-40 cm, mottled dark brown sandy clay loam;
- 40-80 cm, pale brown sand and,
- 80-100 cm, very pale brown sand.



**Table 2. Artifact Inventory, 9CH1208.**

<b>Artifact Inventory, Drudi Lot, Tybee Island.</b>			
<b>Lot</b>	<b>Shovel Test</b>	<b>Depth (cm B.S.)</b>	<b>Count Description</b>
0	1	40-80	1 Oyster shell
0	1	40-80	1 Quartz pebble
0	2	35-55	1 Coal
0	2	35-55	1 Gravel, granite
1	3	30-50	1 Window glass, light green, 22 mm thick
0	3	30-50	1 Gravel, granite
2	4	10-80	1 Gravel, granite with cement coating
2	4	10-80	1 Mortar
2	4	10-80	1 Unidentified iron fragment, small
3	5	30-140	1 Crown cap, "95" label, beverage
3	5	30-140	1 Plastic, modern
3	5	30-140	1 Undecorated ironstone, body
3	5	30-140	1 Bristol slip stoneware, body
3	5	30-140	1 Brick, small fragment
3	5	30-140	1 Mortar
3	5	30-140	1 Clinker
3	5	30-140	1 Oyster shell
3	5	30-140	1 Clear curved glass, goblet or lampglobe
4	6	25-80	1 Oyster shell
4	6	25-80	1 Unidentified iron fragment, modern
4	6	25-80	2 Brick, small fragments
4	6	25-80	1 Ship ballast, grey flint
4	6	25-80	1 Coal
4	6	25-80	2 Gneiss rock, possible ballast or building stone
4	6	25-80	1 Quartz pebble
4	6	25-80	2 Clinker
5	7	30-90	3 Oyster shell
5	7	30-90	1 Quartz pebble
5	7	30-90	1 Brick, small fragment
5	7	30-90	1 Unidentified iron, small fragment
5	7	30-90	1 Clinker
5	7	30-90	1 Ballast rock, basalt cobble fragment
5	7	30-90	1 Clear curved bottle glass
6	8	30-55	4 Unidentified iron, small fragments
6	8	30-55	1 Clinker
7	9	30-80	1 Unidentified iron, small fragment
7	9	30-80	1 Quartz pebble
7	9	30-80	1 Brick, small fragment
7	9	30-80	4 Coal
7	9	30-80	2 Clinkers
8	10	30-90	2 Coal
8	10	30-90	2 Oyster shell
8	10	30-90	1 Bone, small unidentified piece
8	10	30-90	1 Undecorated ironstone, body
8	10	30-90	4 Unidentified iron or tin, small fragments
0	11	30-90	3 Clam shell
0	11	30-90	3 Oyster shell
0	11	30-90	3 Coal
0	11	30-90	2 Clinkers
9	12	15-70	2 Coal
9	12	15-70	1 Railroad spike
9	12	15-70	1 Oyster shell
			<b>77 TOTAL</b>

Shovel Test 2 was located 10 m east of Shovel Test 1, 25 m East of the site datum. Artifacts were recovered from 35 to 55 cm below ground. Soils in the test were:

- 0-15 cm, brown sand loam;
- 15-35 cm, light yellow brown sand loam;
- 35-55 cm, dark brown mottled clay and sand;
- 55-80 cm, pale brown sand (oxygen reduced) and,
- 80-100 cm, very pale brown sand.

Shovel Test 3 was located 15 m East of the datum. Artifacts were recovered from 30- 50 cm below ground. Soils consisted of:

- 0-10 cm, light brown sand;
- 10-30 cm, dark yellow brown sand;
- 30-50 cm, dark brown mottled sand and clay;
- 50-80 cm, pale brown sand and,
- 80-100 cm, very light yellow brown sand.

Shovel Test 4 was located 5 m East of the site datum. Artifacts were recovered from 10-80 cm below ground. Soils in this test were:

- 0-10 cm, dark brown sand;
- 10-30 cm, mottled brown and light brown sand and clay;
- 30-80 cm, pale brown sand and,
- 80-110 cm, very pale brown sand with brownish gray clay chunks.

Shovel Test 5 was located 10 m South of Shovel Test 4. Artifacts were recovered from 30-140 cm below ground. Soils consisted of:

- 0-10 cm, dark brown sand loam;
- 10-20 cm, mottled dark brown sand and clay;
- 20-30 cm, pale brown sand and gravel;
- 30-62 cm, light brown sand and gravel and,
- 62-140 cm, light brown sand.

Shovel Test 6 was located 10 m East of Shovel Test 5. Artifacts were recovered from 25-80 cm below ground. Soils in this test were:

- 0-15 cm, brown sand loam;
- 15-25 cm, yellow brown sand;

- 25-45 cm, dark brown sand and clay;
- 45-80 cm, light brown sand and clay and,
- 80-100 cm, very pale brown sand.

Shovel Test 7 was located 10 m East of Shovel Test 6. Artifacts were recovered from 30-90 cm below ground. Soils consisted of:

- 0-15 cm, brown sand loam;
- 15-30 cm, dark yellow brown sand;
- 30-70 cm, dark grey and brown clay;
- 70-90 cm, light brown sand and clay and;
- 90-110 cm, pale brown sand.

Shovel Test 8 was located 5 m South of Shovel Test 3 and 5 m North of Shovel Test 6. Artifacts were recovered from 30-55 cm below ground. Soils in this test were:

- 0-10 cm, light brown sand;
- 10-17 cm, dark brown sand and clay;
- 17-30 cm, light brown sand;
- 30-55 cm, dark brown clay and sand;
- 55-80 cm, mottled light brown and pale brown sand and,
- 80-100 cm, pale brown sand.

Shovel Test 9 was located 10 m South of Shovel Test 6. Artifacts were recovered from 30-80 cm below ground. Soils consisted of:

- 0-10 cm, brown sand loam;
- 10-40 cm, dark brown sand and clay;
- 40-80 cm, mottled light brown sand and clay and,
- 80-100 cm, very pale brown sand.

Shovel Test 10 was located 10 m South of Shovel Test 9. Artifacts were recovered from 30-90 cm below ground. Soils in this test were:

- 0-10 cm, light brown sand loam;
- 10-30 cm, dark brown clay and sand;
- 30-75 cm, light yellow brown sand and coal and,
- 75-105 cm, pale gray sand.

Shovel Test 11 was placed 10 m South of Shovel Test 5 and 10 m West of Shovel Test 9. Artifacts were recovered from 30-90 cm below ground. Soils consisted of:

- 0-7 cm, light yellow brown sand;
- 7-10 cm, very pale brown sand;
- 10-30 cm, dark brown sand and clay;
- 30-65 cm, mottled light brown sand and dark brown clay;
- 65-70 cm, dark brown sand loam;
- 70-90 cm, yellow brown sand and,
- 90-95 cm, light yellow brown sand.

Artifacts in Shovel Test 12 were recovered from 15-70 cm below ground. Soils in this test were:

- 0-5 cm, brown sand loam;
- 5-15 cm, very dark gray brown sand loam;
- 15-45 cm, dark brown sand;
- 45-70 cm, light brown sand and,
- 70-90 cm, pale brown sand.

Shovel Test 12 was located 10 m east of Shovel Test 9 and 10 m south of Shovel Test 7.

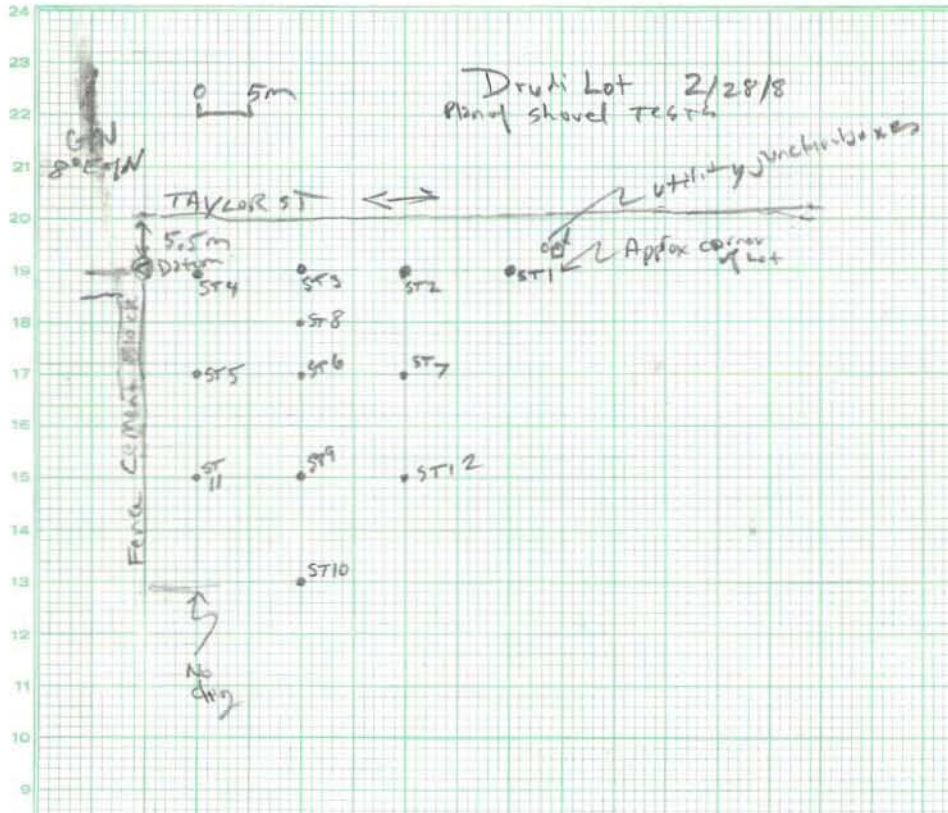


Figure 25. Shovel Test Plan, Drudi Lot.

## V. Interpretations and Recommendations

The archaeological resources from the Drudi lot (9CH1208) that have been presented in the previous chapter demand explanation. From what era are the three objects found by Frank Drudi? What do the letters “S”, “O”, “C”, and “G”, which are stamped on all three of these objects, represent? What is their function and place of origin? Who left them on Tybee Island?

The GPR survey was conducted to better understand the subsurface conditions in the general location where these objects were found. That survey reveals a massive GPR oval anomaly, approximately 30 m in diameter, at depths of 75 cm to 1 m. This feature does not appear to be of natural origin. What does this GPR anomaly represent? When was it created and by whom? What is its function?

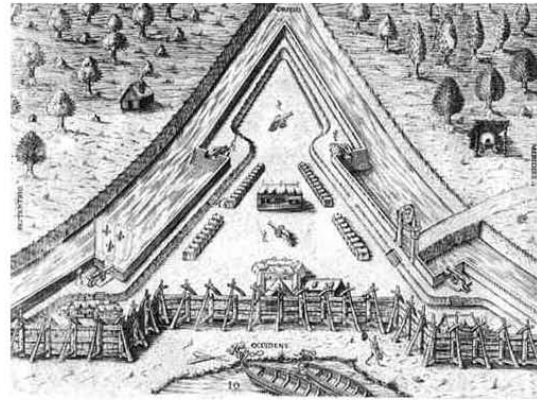
### Aboriginal

Aboriginal occupation of Tybee Island is poorly documented at present. The Drudi objects were probably not made by aboriginal peoples, since the Latin alphabet (post 250 B.C.) was used in their stamped designs. The large anomaly from the GPR survey could possibly represent a large aboriginal construction. If so, one would expect that aboriginal artifacts, such as pottery and chipped stone would be expected to be found nearby. This interpretation was not supported by the shovel test survey, which contained no aboriginal artifacts.

### Spanish

The three Drudi objects, which were recovered from the spoil dirt at the Drudi lot could possibly date to the early 16<sup>th</sup> century and may be relics left by Spanish explorers. Mr. Drudi hypothesized that they may have been left on Tybee Island by Pedro de Quejos, when he landed at the mouth of the Rio de la Cruz (Savannah River) on May 3, 1525. The interpretation that associates these objects with Pedro de Quejos is difficult to support at this particular juncture, but it is one explanation that cannot be ruled out based on the present evidence. Hoffman (1990) considers the Rio de la Cruz to be the Savannah River, based on his analysis of Spanish primary documents.

Most military fortifications of the 16<sup>th</sup> through 19<sup>th</sup> centuries, with the exception of the Martello Tower, would have been composed of lines and angles. Figure 26 shows an example of Spanish fort, which may be representative of the fortifications built by the Spanish in coastal Georgia in the 16<sup>th</sup> century. The GPR data from the Drudi lot does not support the existence of any fortifications from any time period in this vicinity. The large oval anomaly that was identified may possibly be associated with the Drudi Objects, but no conclusions are possible based on the current data.



**Figure 26. Example of an 16th Century Spanish Fort.**

The interpretation of these objects as navigational markers, which were placed at the mouth of the Savannah River in 1525 is a testable hypothesis. Mr. Drudi already has taken an important step to determine the age of these objects by submitting a sample of one object for radiocarbon dating. The resulting date of the C-14 sample (32,510 $\pm$ 550 BP, Measured Radiocarbon Age, Beta 234874) was, unfortunately of far greater antiquity than is feasible for a manufacturing date.

The C-14 date of greater than 30,000 years is not inconsistent with a date for tar or asphalt. Tar and asphalt are found naturally occurring at numerous sites in the world. One particularly large deposit was discovered by the Spanish in Trinidad in the early 16<sup>th</sup> century. This deposit, known as Pitch Lake, is at La Brea, Trinidad (Anthony 2007). Sir Francis Drake used the tar from this lake to caulk his ship in the late 16<sup>th</sup> century.

The Spanish almost certainly used this natural tar source for similar purposes earlier in the 16<sup>th</sup>

century. When Pedro de Ouejos landed at Rio de la Cruz in 1525, he may have had barrels of tar on board his ship for use as caulking material. When he needed to erect a marker to claim this land for his employer, he may have used some of it, mixed with sand and grass, to create a plastic material that could substitute as stone and could be marked with a meaningful emblem.

Mr. Drudi contacted Deonarine Sarabjit in Trinidad. A sample was submitted to Lake Asphalt of Trinidad and Tabago (1978) Limited for petro-chemical analysis. The laboratory results indicated that Trinidad Lake Asphalt (TLA) indeed made up a significant portion of the sample (Sarabjit 2008).

None of the artifacts from the survey date to the Spanish era. This indicates that, if the site was visited by Spaniards, their presence was brief and no material occupational debris was evidenced from the survey sample.

### **Colonial**

Tybee Island was used as a nautical signal station from the very beginning of the British colony of Georgia. General James Oglethorpe ordered that a light station be built at this location and one was quickly constructed. The original Tybee light lasted from 1733-1741, or a period of about eight years. No detailed description of this nautical landmark has survived. The second Tybee Light lasted from 1742 to 1758 or 1768. A simple landscape sketch of this nautical landmark has survived and this image was presented in the previous chapter. The detail in this graphic image is not sufficient for a detailed geographic relocation of the lighthouse on the island. The lighthouse was rebuilt in 1773, and possibly again in 1791. By that time it was located in the approximate vicinity of the present-day lighthouse. No detailed graphic images of the lighthouse from the period after 1773 have been located by historical research.

The location of the first two lighthouses at Tybee Island remains unknown and their ruins have never been described archaeologically. The spatial location of the GPR anomaly is a location on high ground and closer to the mouth of the Savannah River than the present-day lighthouse. It is a likely location for a lighthouse based on this topographic setting. Is it possible that the large GPR anomaly identified on Drudi's lot is

associated with these early lighthouses. This is something that could be addressed by archaeological testing but the present data does not allow a definitive answer to this question.

### **Revolutionary War**

The American Patriots may have established a small fortification or battery on Tybee Island in the early years of the American Revolution. After the British captured Savannah in December 1778, they built a more substantial fort on the north end of Tybee Island. When the French fleet approached in September, 1779, the British abandoned their newly completed fort and burned it and the British troops on Tybee retired to the safety of Savannah. The location of the Patriot battery is shown on one early map of the island and it is indicated some distance northwest of the Tybee Lighthouse. The location of the British fort on Tybee is not known, but was presumably near, or on the foundations of, the Patriot fortification. The GPR anomaly at the Drudi Lot is probably not a Revolutionary War fortification for the reason previously described.

### **Early Federal**

The Tybee Lighthouse remained a vital feature for maritime navigation throughout the late 18<sup>th</sup> and early and middle 19<sup>th</sup> centuries. Major hurricanes struck the region in 1804 and 1824.

A Martello tower was constructed on the northern end of Tybee Island in the first two decades of the 19<sup>th</sup> century. This military fortification was a circular tower. Ruins of the Martello tower were still extant in the early 20<sup>th</sup> century, when a photographic view the ruins (topped by a building) were shown on a postal card. Tommy Solomon and Craig Weaver, stated that the ruins of the Martello tower are still in existence and are located beneath the dunes, north of the Fort Screven Battery.

Cartographic evidence places the Martello tower northeast of the present-day lighthouse, so it is highly unlikely that the GPR anomaly at the Drudi lot is associated with the Martello tower. The Martello tower on Tybee Island remains an interesting research subject in its own right.

### **Civil War**

The Confederates established a large camp at the Tybee Lighthouse in 1861. It remained occupied

by C.S.A. troops until November 1861. Some battery fortifications were constructed a short distance southwest of the lighthouse. The Confederates also manned the Martello Tower. A massive U.S. Navy fleet approached Tybee Island in November 1861. The Confederates abandoned their camp at Tybee Island and they set fire to the lighthouse.

The U.S. troops attacked Tybee Island in November 1861. The Confederates offered minimal resistance before retreating to Fort Pulaski on Cockspur Island. The U.S. military campaign, commanded by General Thomas W. Sherman, consisted of more than 10,000 U.S. troops. The U.S. Command established their camp at the north end of Tybee Island. After the U.S. Army had captured Tybee Island their troops occupied the island for many months. Their camp was centered at the lighthouse vicinity. The troops were engaged in constructing a series of artillery batteries that were trained on the Confederate-held fortress of Fort Pulaski. The U.S. Army maintained control of Tybee Island after they captured Fort Pulaski.

The GPR anomaly at the Drudi lot may be associated with the Civil War era. It is not likely a fortification but it may represent some other type of feature. The lighthouse vicinity was heavily bombarded by U.S. Naval artillery in November 1861. The GPR anomaly possibly represents an impact crater from one very large artillery shell. The sheer size of the anomaly (greater than 30 m in diameter) is larger than most artillery craters from this time period, however. This interpretation is a very remote possibility. No military-related artifacts were discovered in the shovel test survey, however, so a military component in this vicinity is unlikely.

### **Post-Bellum**

After the Civil War the Tybee Lighthouse was rebuilt and it resumed its use as a navigational beacon. Activities associated with the lighthouse operation may have created the GPR anomaly on the Drudi lot. The residents of the area during this period may have generated some of the artifacts recovered from the shovel tests.

### **Fort Screven**

The U.S. Army constructed a fort on the northern end of Tybee Island in 1897. This fort was officially designated Fort Screven in 1899 and it

served as a U.S. Army post until 1947. Drudi provided the LAMAR Institute with a detailed map of the buildings at Fort Screven. Archaeologists examined this map and learned that no improvements were indicated in the vicinity of his property on Taylor Street. Nevertheless, the GPR anomaly may be associated with the 1897-1947 era, when considerable construction occurred on the island. It may represent a borrow pit, or a refuse disposal pit, or some other, non-architectural feature.

### **Natural Formation**

The large GPR anomaly may be the product of natural geological forces. Archaeological testing and/or geomorphological study could probably determine if the anomaly was produced by nature or by humans.

In his discussion with Drudi, Blanton pointed out that a very important aspect of this study lies in determining the age of any stabilized land surface in the vicinity of the Drudi Objects. Archaeology is an important method for this.

### **Recommendations**

Clearly more study of the Drudi Objects and their associated archaeological context at 9CH1208 is warranted. The study of the objects themselves should include extensive chemical and mineralogical analysis of samples from each of the three objects. Meanwhile, these objects should be carefully conserved to prevent further degradation caused by exposure to the elements.

The GPR survey results identified a very large oval anomaly in the central portion of Drudi's lot. This anomaly continues onto the Tybee Lighthouse property, although most of it appears to be on Drudi's property.

The GPR survey was followed by systematically aligned shovel tests. These tests contained cultural material. None of the artifacts appeared to date any earlier than the 19<sup>th</sup> century.

The shovel tests produced a limited variety of artifacts that probably date to the mid-late 19<sup>th</sup> through early 20<sup>th</sup> centuries. Cultural material was encountered in all 12 shovel tests. It was recovered at maximum depths from 55-140 cm below ground. The shovel tests were unable to adequately probe at depth of 1 m or more, so the

potential for very deep deposits was not determined.

Archaeological testing should be conducted on Drudi's property to better understand the nature of this GPR anomaly. The archaeological tests should also attempt to establish the site stratigraphy and determine the presence or absence of buried artifact deposits or features. At least four test 2 m by 1 m units should be placed on the lot for this purpose. At least two of these should target the GPR anomaly. The other two should be placed on other areas of the lot, or their locations should be chosen based on the results from the testing of the GPR anomaly. Standard archaeological excavation techniques should be used for these excavations. The excavation project should conform to established Georgia standards for archaeological survey and testing projects, as outlined by the Georgia Council of Professional Archaeologists (GCPA 2007). These standards may be found online at

[http://georgia-archaeology.org/GCPA/standards\\_for\\_survey/](http://georgia-archaeology.org/GCPA/standards_for_survey/).

The mysteries unearthed on Tybee Island and discovered by Frank Drudi at 9CH1208 demand explanation. Drudi's hypothesis is that these objects were placed on Tybee Island by Spanish explorers in the 1520s. The objects were placed there as a navigational marker and to establish claim on the property for the Spanish monarch and for the Spanish explorers. His hypothesis cannot be discounted based on the present evidence (Figure 27). This report does not provide the answers as to the age and function of these curious objects, although it serves to validate and verify Mr. Drudi's find and to provide baseline data for future studies in the vicinity. The further identification of these finds is left to the task of Spanish scholars.





**Figure 27. Drudi Objects 1-3 (Photo courtesy of Frank Drudi).**



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## Identity of the Drudi Objects

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The identity of the four initials that are stamped on all three of the Drudi objects (see Figures 20-22) remains undetermined. These additional comments are added here as one possible explanation of whose initials these four letters may represent. On all three archaeological specimens the initials “S” appears in the upper left field; “O” appears in the upper right field; “C” appears in the lower left field; and “G” appears in the lower right field. Frank Drudi suggested that the initials, “S.O.” may refer to Sancho Ortiz de Urrutia, and that the initials, “C.G.” may signify Charles of Ghent.

Sancho Ortiz de Urrutia was a merchant and business partner of Allyon (Hoffman 1990:5). Quejo, who worked as a pilot for Ayllon, had worked earlier as a pilot and shipmaster of Sancho Ortiz. In April or May, 1521, Ouejo was hired by Sancho Ortiz to pilot a ship for a trip to Cuba and, following that, to make a slave raid in the Bahamas. Ayllon made a contract with Charles V in 1523 to explore North America and in the summer of 1525, Ouejo was hired by Ayllon to explore the North American coast for a potential settlement site (Hoffman 1990:34).

Charles V, Emperor of the [German] Empire, was also known as Don Carlos de Gante [Charles of Ghent] I of Spain. He was born in Ghent, which is now part of Belgium. Although elected Emperor in 1519 he was hampered from taking his royal office by rebellions in 1520 and 1521. By 1523 Charles had made a contract with Ayllon for exploration of North America (Hoffman 1990:18; Recondo 2009).

Drudi’s interpretation of Sancho Ortiz de Urrutia as “S.O.” and Don Carlos de Gante as “C.G.” is thought provoking. Both men were backers of Ayllon’s exploration and Ouejo (or possibly even Ayllon) may have had an agreement to claim newly discovered lands in their names. A full determination of the identity of the letters “SO CG” on the three Drudi Objects require further historical research, well beyond the scope of the LAMAR Institute’s reconnaissance survey.

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