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Bulow Plantation Ruins Historic State Park
Slave Quarter Investigation and Spatial Analysis

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Current Investigation/1A-32 permit

Under Florida Bureau of Archaeological Research Permit No. 0910.050 the Alliance for Integrated Spatial Technologies (AIST) completed a GPS mapping and metal prospection project at the Bulow Plantation Ruins Historic State Park in January of 2010. This project was based on work began at the park during AIST’s report on the Archaeological Resource Sensitivity Modeling in Florida State Parks District 3: the East and Central Florida Region (Collins et al. 2010), completed in the fall of 2010. During that project sub-meter GPS was used to record 15 of the suspected 40 locations for slave quarter sites, and linear pattern features were matched up with historic references for the quarter locations. This current project is a continuation of that District 3 work, and was done with the anticipation that more slave quarter locations could be verified.

The main goal of this project was to evaluate metal detection as a prospection tool at Bulow to see:

1. If there was a lot of intrusive metals, or if we were in fact able to verify or find locations based on metal ‘signatures’;
2. If features, such as linear patterns indicating nail/structural aspects could be determined;
3. If we could find likely sites for house locations based on where ‘they should be’ from historical accounts, but in the absence of structural elements such as coquina rock and;
4. If we could determine house lot activity areas based on metal signature returns.
5. To map and delineate all these areas with sub-meter GPS for future

Bulow Plantation Ruins Historic State Park

Bulow Plantation Ruins Historic State Park is a small parcel of 147.99 acres that is managed as part of a multi-park unit along with Bulow Creek, Tomoka, and Addison Blockhouse Historic State Park. The park is located in the Atlantic Coastal Lowlands primary physiographic zone, with two major landforms of the Atlantic Coastal Ridge and the Silver Bluff Terrace (Myers and Ewel 1990). The park is of relatively low topographic relief, with the highest elevations indicated by LiDAR seen on the western edge of the park of slightly more than 14 feet. Soils at Bulow Plantation Ruins Historic State Park are predominated Tuscarilla series, underlain by clays and shell matrix. This subsurface layering leads to higher fertility rates, likely associated with the Plantation-era agricultural activities in the area (FDEP 2003). Today’s vegetation is largely hammock forest throughout the park’s range. Toward Bulow Creek, the soils are comprised largely of Cassia Fine Sands that are somewhat poorly drained.

The FMSF GIS database shows five recorded archaeological site loci, with three relating to the historic occupation and plantation-era structures and activities (8FL7A, B, C). Another site (8FL17) has prehistoric temporal affiliation, and one site is shown as an historic road segment (8FL142) that also has a prehistoric component (Figure 1). The historic Plantation-era sites include 8FL7A, 8FL7B, and 8FL7C that comprise the main house ruins, sugar mill, and slave houses of the Bulow Plantation, with periods ranging from the British and Spanish Second
Figure 1. Map showing the previous and updated FMSF site boundaries for 8FL7C.

Period to the Seminole First and Second Wars. There are also a number of building and structural remains and scatters, some of which we collected GPS data for, that are not currently listed separate from plantation ruins with the FMSF. Nearly 75% of the park is a National Register designation. Interestingly, the designated polygonal area does not capture all of the features associated with the plantation landscape, namely the slave houses and slave activity areas to the south and east of the property (see Figure 1).

In 2009, during the field work for the 2010 AIST (Collins et al.) report we became involved in the documentation and conditional assessment for sugar mill ruins at the Bulow Plantation Ruins Historic State Park. The use of non-invasive documentation techniques such as GPS, Ground Penetrating Radar and 3D Terrestrial Laser Scanning have been the focus of these works, which at Bulow Plantation Ruins Historic State Park, have been used for stabilization and conservation planning. They are also providing research inquiries and data for several students at USF currently working on Master’s thesis projects involving these plantation-era properties. Rebecca C. O’Sullivan, a USF graduate student, assisted in the current project as part of her graduate research, and images from her thesis are included within this report to assist in the
illustration of the location of the slave quarters and other features within the Bulow Plantation Ruins State Historic Park.

Our research at Bulow Plantation Ruins Historic State Park and Bulow Creek State Park has generated GPS data that has been useful in this modeling and analysis. Corrected positions for the slave house arc pattern (8FL7C) have been plotted and submitted to the FMSF (see Figure 1). Additionally, we mapped a number of historic road and trail segments, and affiliated out-structure buildings, such as the spring house, wells, building remains and boat slips. We also used GPS to examine social spatial patterning with the extant slave house remains, and have mapped in agro-industry features, such as cat-faced trees, field boundaries and historic fence-line indicators, ditching, drainage, and canal features.

Bulow Plantation Slave Cabins

The current project focused on the Bulow Plantation slave cabins, located in the eastern portion of the state park grounds. The land the current project area is located within was part of 4,675 acres of land traded to John Russell in 1812, by Don Juan de Estrada, acting Governor of East Florida; 4,000 acres were in exchange for the schooner Perseverance, and 675 acres as head-rights for his family and slaves (Wilson 1945). Russell may have made some minor improvements prior to his death in 1814 or 1815, but the Russell family did not occupy the property after that time. In 1821, John Russell’s son James sold the property to Charles Bulow for $9,944.50 (Baker 1999).

Bulow immediately began developing the property, and is said to have brought in over 300 slaves for the initial phases of construction and land preparation (Ormond 1941). At the time of the 1830 census however, only 193 enslaved people were recorded, although this was still more than twice the number found at any neighboring plantation (1830 Census of the Territory of Eastern Florida). In 1839, Florida delegate Charles Downing stated that Bulow had over 200 slaves at the time of the Second Seminole War. The slaves at the Bulow plantation ultimately cleared and planted more than a thousand acres in sugar cane and twelve hundred acres in cotton (Daniel et al, 1980).

Historical accounts disagree on the disposition of the slave quarters at the outbreak of the Second Seminole War. The second regiment of Florida militia, known as the “Mosquito Roarers,” occupied Bulowville for about one month starting on December 28, 1835. The troops constructed breast works of cotton bales and built a four-bastioned fort of palmetto logs before abandoning the plantation (Smith 1836). After the evacuation, Seminoles burned all the major buildings, but several authors (Smith 1836; Strickland 1980) maintain the slave cabins were left intact.

In one of the claims for damages the Bulow family submitted to the United State Congress, the slave cabins are described as forty-six in number, 12 by 16 feet. (United States Senate 1837). These were small frame structures, with tabby floors, shingle roofs and coquina-block
foundations, approximately 150 yards from the main house (Gordon 2002) (Figure 2). This unusual arrangement was found at only one other property in Florida, the Kingsley plantation in Duval County, and may reflect African tradition, as villages in some parts of the continent featured homes arranged in a large semi-circle (Cox 2009); another theory suggests that the cabins were being used as a defensive arrangement to protect against attacks (Gonzalez-Tennant 2007). The roughly finished lumber used in their construction was probably a product of the plantation’s own steam-powered sawmill. Discussing slave quarters at Cannon’s Point, roughly 25 miles to the north, John Otto estimated as many as seven or eight slaves could have occupied one cabin (Otto 1983). In Larry Rivers’ survey of 1860 census statistics, he found a range of from 4 to 10 enslaved people per cabin (Rivers 2000). Correspondingly, if there were 300 enslaved workers when the Bulow cabins were constructed, the occupancy rate would have been 6.5 people per cabin; well within this range.

Figure 2. Sketch map of the Bulow Plantation Slave Quarter locations, with other features noted (map credit: Rebecca O’Sullivan, 2012 USF Master’s thesis).

Field Methods

In January of 2010 a pedestrian and limited metal detector prospection survey was conducted at the Bulow Plantation Ruins Historic State Park by AIST employees Lori Collins, Travis Doering, and Bart McLeod, as well as USF graduate students Elizabeth McCoy and Rebecca O’Sullivan. The pedestrian survey was focused on locating any extant foundations or piers related to
historic slave quarters. Grids were walked in 10 meter interval transects. Cut coquina blocks and other historic features located were flagged and then recorded with a Trimble GPS unit with sub-meter accuracy. A metal detector was then employed to examine the extreme north portion of the arc that where the slave quarters were formerly located (Figure 3). Since these wooden structures were burned down in 1836, and the area remained relatively undisturbed, it was thought that a pattern of nails might be located where the quarters once stood. Additionally, evidence of possible activity and use areas around the former quarter locations was sought out.

This specific area, in the northernmost portion of the former slave quarter locations, was chosen because of the large number of cut coquina blocks visible on the surface and also because it was relatively clear of vegetation, making it easier to utilize the metal detector. The distinct resources investigated were designated Slave Quarter [SQ] 1 and 2. Objects identified through the metal detector survey were mapped in using the sub-meter GPS. These included iron studs, washers, cut nails, pieces of a cast iron kettle, tine from an iron rake, UID metal fragments, UID lead fragment, faunal material fragment, and an oyster shell (Table 1).

Figure 3. Location of the Bulow Plantation Ruins relevant features, including the locations of the slave quarters/cabins, shown on a DEM with elevations.
Results and Discussion

During the magnetic prospection survey conducted around the slave quarter area within Bulow Plantation Ruins Historic State Park in January of 2010, sub-meter GPS points and line data was collected, and a metal detector was employed to try and locate underground features related to the quarters that once stood at this location (see Figure 3). This project was a continuation of work started during the survey for AIST’s *Archaeological Resource Sensitivity Modeling in Florida State Parks District 3: the East and Central Florida Region* report (2010). Updated site file forms for site 8FL7C were completed and submitted as part of the modeling project.

The sub-meter GPS unit was used to collect location data from artifacts and architectural features such as coquina blocks, and the metal detector was utilized to locate the presence of sub-surface artifacts around these features. Although some artifacts were collected, many were left undisturbed, as the goal of this project was to try and establish the pattern of the slave quarters and their related features through metal prospection, not to complete a comprehensive survey of the entire site.

In their 1980 survey, Daniel et al located the coquina block foundations of at least nine slave cabins associated with the Bulow estate. The foundations are situated at 20 to 40 meter intervals, with individual quarters arranged as a scatter of cut coquina blocks 2 to 4 meters in diameter. During the current survey the coquina blocks identified by Daniel et al., specifically those around the area of the former locations of the first two slave quarters SQ 1 and 2, were scanned by the metal detector.

As previously discussed, the areas of SQ 1 and 2 were chosen for the metal detector survey because they were not heavily vegetated and looked relatively undisturbed (as judged by the location of the cut coquina blocks). Within the coquina blocks of SQ1 a number of metal detector hits were encountered, a few of which formed a linear pattern of approximately 1 meter in length (Figure 4). Artifacts recovered from SQ1 included iron nails, other UID nails, a tine from an iron rake, fragments from a cast iron kettle, UID iron and metal pieces, an oyster shell, and a UID faunal material item were recovered from this investigation (see Table 1). Nails discovered were found to fit the Type A pattern, manufactured from 1790-1820 (Visser 1996) (Table 1). These were created by the earliest machines which sheared the nails from a single sheet of iron, moved back and forth with every stroke to produce a tapered shank, resulting in burrs on the diagonally opposite edges. The nail was then held in a clamp and headed by hand (Bell 2004).

One of these type nails was also found to the west of SQ2, along with a single piece of unidentified faunal material (see Table 1). These were the only artifacts recovered from around SQ2, although a number of hits were detected around the area (Figure 5). Only the locations of these hits were recorded; the ground was not disturbed, with the exception of the one area west of the quarter where the nail and faunal material were found. Analysis of the sub-meter GPS location data revealed that linear patterns of artifacts/metal detector hits were recorded.
Figure 4. Location of metal detector hits and cut coquina blocks around Slave Quarter 1 (map credit: Rebecca O’Sullivan, 2012 USF Master’s thesis).
around SQ2. These may be nails from the exterior walls of the former slave quarters. Furthermore, a mounded dirt area was also located and mapped within the interior of SQ2 (see Figure 5).

The artifacts collected from 8FL7C during this project appear to match up with the activities occurring at the Bulow Plantation slave quarters during its known period of occupation. Artifacts related to gardening, food preparation, and the architecture of the former structures were recovered and observed.
As a result of this prospective metal detector survey we were able to locate and verify locations of metal artifacts located around the Bulow Plantation Ruins former slave quarters, as well as determine linear patterns of nails/metal artifacts around the quarters. We were also able to verify house lot activities based on artifacts located from the metal detector survey, including food preparation and gardening.

The continued use of metal detectors around the Bulow Plantation Ruins Historic State Park slave quarters should be considered as an option to gain more information about the precise location and activities associated with these structures, while limiting the amount of damage to both the quarters and the surrounding archaeological deposit associated with them.
Table 1. Artifacts recovered during the current investigation of the Bulow Plantation Slave Quarters.

<table>
<thead>
<tr>
<th>FS Number</th>
<th>Description</th>
<th>Provenience</th>
<th>Measurements</th>
<th>Photo</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>iron kettle fragments</td>
<td>SW corner SQ1</td>
<td>small fragments of varying sizes</td>
<td><img src="image1.jpg" alt="Photo" /></td>
<td>fragments related to iron kettle (FS#8)</td>
</tr>
<tr>
<td>2</td>
<td>tine from an iron rake; nail fragment</td>
<td>SQ1</td>
<td>tine - 9&quot; long, 1&quot; wide at end, .325&quot; thick until point</td>
<td><img src="image2.jpg" alt="Photo" /></td>
<td>corroded</td>
</tr>
<tr>
<td>3</td>
<td>iron spike, corroded</td>
<td>SE SQ1</td>
<td>5.75&quot; long, head is 1.125&quot; square, shaft thickness .5&quot; at top</td>
<td><img src="image3.jpg" alt="Photo" /></td>
<td>spike appears to be wrought, with taper on all sides; several fragments that have flaked off spike are included.</td>
</tr>
<tr>
<td>4</td>
<td>4 iron nails; lead piece</td>
<td>SQ1 interior</td>
<td>1.25, 1.325, 1.625, 1.8&quot;; lead piece approx .75 X .625&quot;</td>
<td><img src="image4.jpg" alt="Photo" /></td>
<td>cut nails, horizontal grain; burr marks and shape indicate Type A, 1790-1830 (Visser 1996); irregularly shaped lead may be sprue or flattened ball.</td>
</tr>
<tr>
<td>5</td>
<td>multiple iron fragments</td>
<td>SQ1</td>
<td>largest piece is 2&quot; x 3.25&quot;</td>
<td><img src="image5.jpg" alt="Photo" /></td>
<td>fragments extremely corroded, no identification possible</td>
</tr>
<tr>
<td>6</td>
<td>iron spike, corroded</td>
<td>NW SQ1</td>
<td>4.75&quot; long,</td>
<td><img src="image6.jpg" alt="Photo" /></td>
<td>cut iron, horizontal grain with taper on only two sides, head and burr patterns not evident</td>
</tr>
<tr>
<td>FS Number</td>
<td>Description</td>
<td>Provenience</td>
<td>Measurements</td>
<td>Photo</td>
<td>Comments</td>
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<td>--------------------------------------------------------------------------</td>
</tr>
<tr>
<td>7</td>
<td>oyster shell, iron fragments</td>
<td>SQ1</td>
<td>shell is 3.25&quot;, iron ring is 1.5&quot; across, nail piece is 2.75&quot;</td>
<td><img src="image1" alt="Photo" /></td>
<td>iron fragments are heavily corroded; circular piece appears to be a washer.</td>
</tr>
<tr>
<td>8</td>
<td>pieces of cast iron kettle, corroded</td>
<td>SQ1</td>
<td>several pieces, top piece shown 6&quot; x 6&quot;</td>
<td><img src="image2" alt="Photo" /></td>
<td>pieces are extremely fragile and friable, conservation needed.</td>
</tr>
<tr>
<td>9</td>
<td>iron nail, bone piece</td>
<td>W of SQ2</td>
<td>nail 2&quot; long, bone approx 1&quot;</td>
<td><img src="image3" alt="Photo" /></td>
<td>nail appears to be cut, Type A, headless; unidentified bone is burned.</td>
</tr>
</tbody>
</table>
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