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Callawassie Island Submerged Archaeological Prospecting Survey: Ground-Truthing Results
By James Spirek

An underwater archaeological survey in the Colleton, Okatie, and Ogeechee Rivers that surround Callawassie Island continued in 2005 to determine the sources of 30 of the 243 magnetic and acoustic anomalies detected in 2004. The remaining 213 anomalies detected during the survey may undergo ground-truthing activities in the future as funding permits. The main objective of the survey was to document intertidal and submerged cultural resources residing along the shores and bottomlands surrounding Callawassie Island. Supported by the Callawassie Island Stewards, Inc., an organization affiliated with the island’s homeowner organization, the Marine Research Division (MRD) at SCIAA launched survey operations in July 2004 at eight separate survey blocks (See Legacy, Vol. 9, Nos. 1-2, p. 32). Following post-processing and analysis of the electronic data collected during the remote sensing phase, the survey resumed operations in 2005 to begin the process of identifying the sources of the magnetic and acoustic anomalies.

See CALLAWASSIE, Page 4

Figure 1: Map of ground-truthed magnetic and acoustic anomalies. (SCIAA graphic)
To launch the process of determining the sources of the detected anomalies, SCIAA personnel undertook a low tide survey of the remote sensing areas on January 20-21, 2005. The purpose of this phase of the survey was to visually identify anomalies and to confirm the identity of sonar anomalies that were estimated to lie exposed during low tide. Using this method, and profiting from exceptionally clear water to a depth of 0.9-1.2 meters (3-4 feet), the sources of four anomalies were identified: two anomalies were identified as crab traps, one anomaly a boat trailer, and another anomaly was identified as an iron rebar rod. A number of others were confirmed as crab traps. Those not visible were presumed obscured by oyster growth or buried under sand or mud. A large object located in one of the small creeks bisecting the marshes across from Tabby Point, previously viewed from afar during the remote-sensing survey, was identified as a large crumpled section of corrugated metal drain pipe. No other structures were observed in the marsh to low tide interface. While conducting the low tide survey, aerial reconnaissance took place on January 20 to photograph the waterways surrounding Callawassie Island and to possibly identify objects exposed further in the marsh around the island. No items of interest were observed from this aerial perspective. The flight also covered the Port Royal Sound region to gather aerial panoramas of previous and future work areas.

For two weeks, May 23 through June 3, 2005, SCIAA personnel and volunteers dove on the 30 prioritized anomalies. Anomalies were selected for ground-truthing primarily for their potential to reveal the presence of historically or archaeologically significant cultural materials. Additionally, a range of magnetic anomalies, some large and some small, were chosen in order to learn the sources of a particular sized anomaly. This was done on the basis of realizing that watercraft in this area may contain low amounts of associated ferro-magnetic materials, as well as a simple desire to learn what kind of magnetic cultural sources resided on the bottom of the local waterways.

Examination of these 30 anomalies did not reveal any cultural resources of historical or archaeological significance. The majority of the anomalies were crab traps, both active and "ghost" traps, that bear witness to the active use of the waterway as an important fishery. Other modern objects included a dumpsite of one-inch diameter pipes, a large iron bracket, and two screw anchors. In some cases, underwater inspection did not identify the source of the anomaly as they were buried beyond metal detector range. Some anomalies were not investigated because the magnetics proved ambiguous; i.e., not as strong as before, for a variety of reasons—including the sensor hitting the bottom. Only one anomaly, categorized as low priority, was not investigated due to time constraints (Fig. 1).

The operations to relocate magnetic or acoustic anomaly for visual inspection by archaeologists consisted of several steps. First, the survey boat reacquired the target using the magnetometer or sonar to isolate the anomaly. Once isolated
and buoyed, archaeologists equipped with a J. W. Fisher Manufacturing Company Pulse 8 metal detector and a four-foot hand held probe began a circle search at five-foot increments out to a maximum of four turns or 20 feet to locate the anomaly (actually covering a 40-foot diameter area). In some cases, the target was exposed on the bottom, or usually, buried and detected by the metal detector and contact made with the hand-held probe. Others eluded the metal detector and were presumed buried deeper than the metal detector range of around three to four feet below the sediments. Hand fanning was usually sufficient to expose the object in question. Only once was an underwater induction dredge used to follow the remnant of a buoy line barely protruding above the sand that led to a crab trap buried several feet below the sediment. Some of the objects causing the magnetic or acoustic anomaly were brought on board the boat to photograph and measure (Fig. 2). While the majority of the sites were visually inspected by diving, during an extremely low tide, archaeologists walking along the southern shoreline of the island on the Colleton River survey area found two prioritized sites were crushed crab traps. Additionally, an iron pipe connector was visible in the mud and apparently detected as a 1.3 gamma anomaly by the magnetometer. Walking along the exposed sand flats of the marsh islands in the Colleton River revealed a number of crab trap iron rebar bases.

Despite the lack of significant underwater cultural materials, the possible remains of a landing or wharf was observed at Tabby Point. Several logs set perpendicular to the river and protruding from the marsh suggest the presence of a landing or wharf (Fig. 3). Although not constructed of typical materials, i.e., cobbles and bricks, the landing or wharf is located at one of two prime deepwater/land interfaces on the island. Further work is needed to record the structure and to confirm its tentative identity as a construct associated with the transfer of people and goods from the water to the land.

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