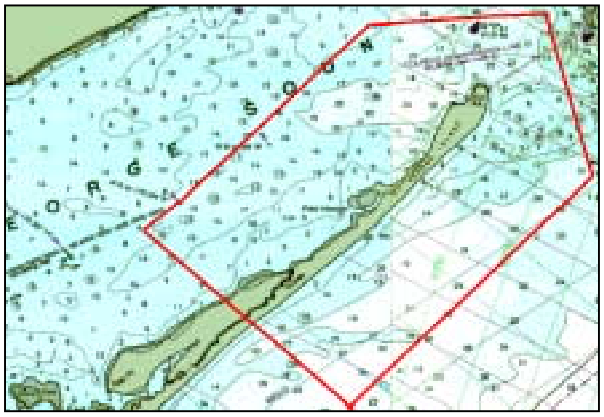
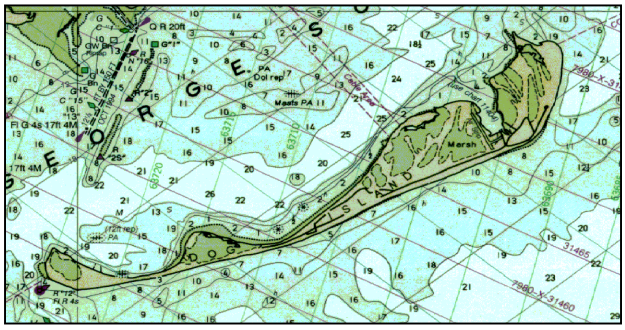
Dog Island Shipwreck Survey

Report of Field Operations:

June 26th through August 4th 2000





Research Reports No. 9

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Introduction

The Dog Island Shipwreck Survey (DISS) is an ongoing underwater archaeological research project conducted by the Florida State University (FSU), Department of Anthropology's Program in Underwater Archaeology (PUA). This research received archaeological permits from the Bureau of Archaeological Research, Florida Department of State, the Florida State Park System, and Dredge and Fill permits issued by the Department of Environmental Protection and the Army Corps of Engineers. Six-weeks of intensive fieldwork and interim report writing took place from June 24 through August 4, 2000.

This research focused on the discovery and identification of historic submerged cultural resources in Apalachicola Bay and Apalachee Bay, Florida. The 2000 research activities focused on two locations: Ballast Cove, a small natural inlet located on Dog Island's bayside and offshore of St. George Island including the Bay and Gulf sides of the island. The St. George Island research also included a terrestrial magnetometer survey along the Gulf side beachfront of the island (Figures 1, 2).

As in 1998 and 1999, the 2000 research project was part of the FSU-PUA Field School in Underwater Archaeology (ANT 4135 and 5193). This field school is designed to provide students with a variety of archaeological experiences, dealing with submerged prehistoric sites and historic shipwrecks. A total of 13 staff, 13 students and four volunteer crewmembers and archaeologists participated in the six week long field session, based from the FSU Marine Laboratory at Turkey Point in Franklin County, Florida.

The DISS 2000 project constituted two operations utilizing various methods of archaeological investigation. Fieldwork in Ballast Cove, Dog Island involved testing, excavation and mapping of a newly discovered shipwreck known as Ballast Cove Wreck A. Two weeks of fieldwork concentrated at this site in order to introduce students to the methodologies used to map and record a shipwreck site. The remaining two weeks of the field school focused on the survey objective, the search for the remains of HMS *Fox*, involving marine and terrestrial magnetometer surveys offshore and on St. George Island.

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Environmental Background

Dog and St. George Islands are two barrier islands located in Apalachicola Bay. These islands formed between 3,500 and 6,500 years ago, as sea levels subsided, around deposited sediments from nearby rivers such as the Carrabelle and Apalachicola Rivers (White et al 1995). Even today, the morphology of these islands continues to change due to wind and wave action. Four barrier islands off Apalachicola comprise this system. St. Vincent Island and Little St. George Island are located to the west while St. George Island and Dog Island are located to the east. The largest island, St. George Island, extends for approximately 28 miles in an east-west layout. Dog Island, on the other hand, is approximately seven miles long.

The islands are continually modified by wind and wave action. These changes are readily apparent by comparing historic maps of the region since the 18th century (Florida DEP 2000). Repetitive emergence, inundation and migration of these barrier islands from fluctuating sea levels have provided archaeologists and geologists with numerous avenues of research to pursue. The accretion of sediments on the eastern tip of St. George Island demonstrates how dynamic this environment is but allows archaeologists to estimate how this island and others may have changed throughout history (Faught and Damour 2001).

The ecosystems of St. George and Dog Island typically contain sand dunes, dune ridges, saltwater and freshwater marshes, numerous grass species, beaches and hardwood flats (Meide et al. 2001). Numerous species of flora and fauna inhabit the islands including seasonal nesting of sea turtles and birds. Protected floral species, such as sea oats, are abundant along the dunes of St. George and Dog Islands.

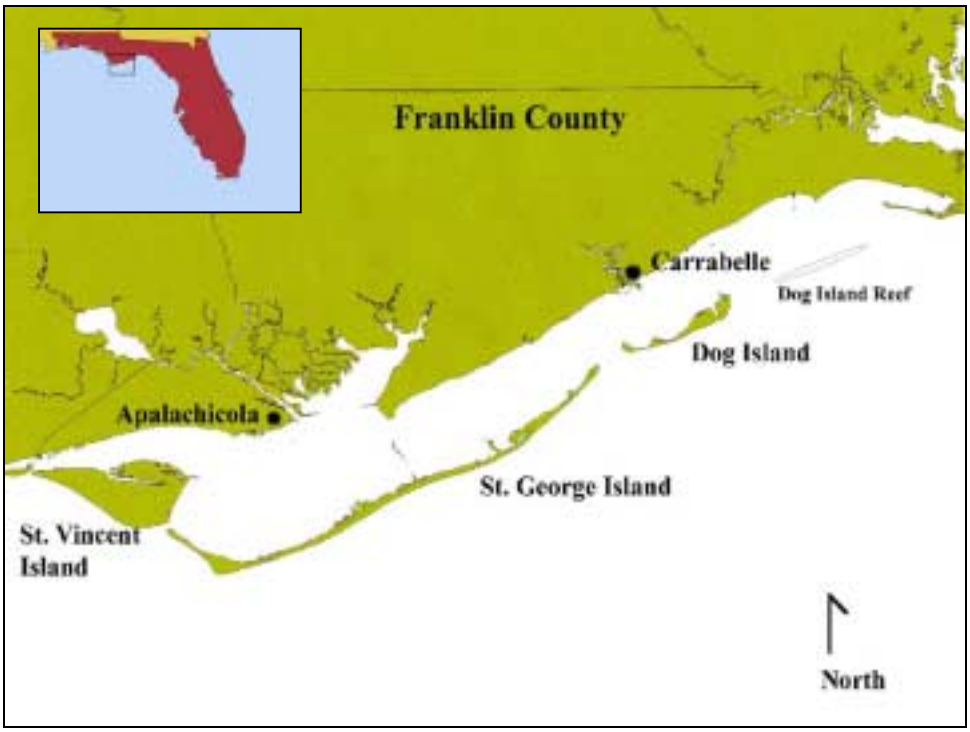

Figure 1. Apalachicola Bay barrier islands in Franklin County, Florida.

Previous Research

Limited intensive archaeological investigation had been conducted on Dog and St. George Islands before 1999. On Dog Island, only nine archaeological sites (six terrestrial sites and three historic shipwrecks) appeared in the Florida Master Site File (FMSF) since 1998 (Meide et al. 2001).

Perhaps the earliest archaeological investigation of a site on Dog Island occurred in 1952, under FSU researcher Glen T. Allen. The Dog Island Site (8FR25) may have been a seasonal occupation site dating to the late prehistoric period. A nearly complete ceramic vessel was recovered (White et al. 1995; Meide et al. 2001).

In the late 1960's, a resident of the island discovered the remains of a prehistoric dugout canoe. This site, designated as Dog Island II Site (8FR343), was later investigated by state archaeologists in 1979. Other artifacts recovered include Fort Walton Incised and Check-Stamped pottery. The site is located on an eroding face of the bayside coastline and may require future investigation (Meide et al. 2001).

In 1980 and 1981, the first archaeological survey for historic shipwrecks in this area was conducted by FSU graduate student David Brewer as a part of the ANT 4131-*Techniques of Underwater Site Research* class. Terrestrial and marine magnetometer surveys searched for the remains of HMS *Fox* (1799) (Brewer 1982: Palmer 1997). Two days of terrestrial magnetometer survey on the far eastern tip of St. George Island complemented the marine surveys with no significant magnetic anomalies located. The marine magnetometer survey discovered eight anomalies although none were tested (Meide et al. 2001).

One elusive site, the East Pass Wreck, (8FR799) discovered in 1986 by local shrimpers was never investigated by archaeologists. The only artifacts recovered were two tiles, thought to be of French origin, dating to the late 18th to early 19th centuries. Photographs of these artifacts are on file at the Florida Bureau of Archaeological Research (Meide et al. 2001).

The first archaeological investigation of the Dog Island Shipwreck #1 (8FR813) occurred in 1987. The vessel may be the remains of the late 19th century fishing smack *Priscilla*, which wrecked in 1914. It was investigated by Richard Haiduven, KC Smith, David Muncher, Joe Nolin and Alexandria Nolin. Unfortunately, no formal report was produced (Meide et al. 2001).

In 1989, Dog Island Shipwreck #2 (8FR814) was investigated by archaeologists Richard Haiduven, KC Smith, and David Muncher. Further intensive survey of this wreck, conducted by FSU students as a part of the ANT 4131-*Techniques of Underwater Site Research* class, occurred in 1990 (White et al 1995; Meide et al. 2001).

Dr. Michael Faught initiated the Dog Island Shipwreck Survey in 1999. This project represents ongoing research designed to introduce students to techniques of underwater archaeology while conducting original research in an educational environment. FSU Graduate students Chuck Meide and James McClean directed field operations for the DISS, a part of the 1999 Field School in Underwater Archaeology. During 1999, five new sites were discovered and added to the FMSF database. Other sites initially investigated but not designated as archaeological sites are slated for investigation in the future (Meide et al. 2001).

In the spring of 2000, as a part of the ANT 4131 class, *Techniques of Underwater Site Research*, run by Graduate Teaching Assistants Melanie Damour and Thadra Palmer, students and staff attempted to relocate sites in Ballast Cove discovered in 1999. While surveying in the vicinity of the Tile Ballast Scatter (8FR891) and Tank Ballast Site (8FR895), a randomly placed test excavation unit (Test Unit A) yielded brick and tile fragments and a pipe bowl (Figure 9). Subsequent survey over 25 meters west of the excavation unit located a large metal object near well-preserved wooden hull structure (Ballast Cove Wreck A). Originally believed to be the "metal box or tank" associated with the Tank Ballast Site, the object proved to be a new site not previously recorded or investigated by the 1999 survey.

Another investigation conducted during the ANT 4131 class in Spring 2000 involved measuring the hull structure of an LCM (Landing Craft, Mechanized) located off Lanark Reef, briefly investigated during the 1999 field season (8FR892). The hull is broken into three pieces, which is apparent in the side scan sonar image (Meide et al. 2001). The length of the hull measured about 16.6 meters (54'6") with a width of 4.26 meters (14'). Frames were spaced 0.76 meters apart (2'6"). The "A-frame" or landing ramp located at the bow protrudes above the sediments 2 meters (6'9") while the main deck rises between 1 meter (3'5") and 1.27 meters (4'2"). The pilothouse length is 4.3 meters (14'4"), width is 1.825 meters (6'1"), and height is 1.025 meters (3'5") at the port aft corner and 1.25 meters (4'2") at the starboard fore corner. A scoop-shaped object located near the stern of

the vessel, and probably associated with the wreck, measured 2.875 meters (9'7") in length and 0.85 meters (2'10") in width (Damour 1998-2000: 66a-67a; Meide et al. 2001)

2000 Research Objectives

Research Design

The 2000 summer field season comprised two field operations. The first two weeks of the project focused on submerged cultural resources located in Ballast Cove, a natural inlet on Dog Island's bay side. The last two weeks of fieldwork concentrated on the search for HMS *Fox* on and around St. George Island.

Systematic investigation of this new shipwreck, Ballast Cove Wreck A, occurred for two weeks during the summer field school. Methodologies included excavation, detailed mapping, survey for additional sites and curation of recovered artifacts as part of the educational experience. The first week of investigation involved mapping of the Ballast Cove Wreck as well as diver visual surveys conducted 25 meters east and west of the metal object. The second week involved systematic mapping and recording hull structure, artifacts and hand-fanned testing transects to determine the extent of the site and hull structure.

Figure 2. Aerial view of Ballast Cove, Dog Island, looking West-Southwest.

The last two weeks of fieldwork concentrated on the search for HMS *Fox* on and around St. George Island. Research conducted in the St. George Island survey area primarily focused on locating and identifying the remains of HMS *Fox* (1799). Recent research into the geological movement of the island since 1859 has indicated three possible areas for

investigation. These investigations included a marine magnetometer and side scan sonar survey on the Bay side and Gulf side of St. George Island (Figure 3). When recording anomalies, deployed buoys marked locations for examination by diver visual survey and underwater metal detectors. Additionally, a terrestrial magnetometer survey of St. George Island's beachfront was initiated for two days in order to locate subsurface anomalies that may be associated with the *Fox*.

Figure 3. Marine magnetometer head, cable and buoy.

The total amount of time spent during the Dog Island Shipwreck Survey was 195 person days over four weeks, with 89 person days accumulated by the St. George Island survey. Of this time, 130 hours of underwater research was conducted at Ballast Cove and 79 hours on the St. George Island survey.

Ballast Cove

Methodology

Ballast Cove was investigated using remote sensing devices, during the 1999 summer field season, including a Marine Sonics 600 kHz side scan sonar and Geometrics 866 proton precession magnetometer. The survey located three new sites in Ballast Cove, which were briefly investigated. Continued research during the spring of 2000, as a part of the ANT 4131 class, *Techniques of Underwater Site Research,* excavated a test unit, designated as Test Unit A, which contained a number of diagnostic artifacts. Recovered artifacts included 18^{th}-19^{th} century pipe bowls and stems, ceramic fragments, and bricks (Bradley 2000 106-108).

Diver visual survey conducted over 25 meters west of Test Unit A located a heavily concreted metal object and a fourth new site, a shipwreck with exposed hull structure designated as Ballast Cove Wreck A. The site designation relates the location of the wreck as the first of a series of sites in Ballast Cove to be investigated. This system is

more specific in location than the previous system of identification such as Dog Island Shipwreck 1 and 2. The metal object near Ballast Cove Wreck A was initially identified as the "metal box or tank" of the Tank Ballast Site but was later determined to be a new site. The "metal box or tank" of the Tank Ballast Site was recorded as a rectangular box measuring 3 meters by 1 meter by 0.68 meters (Meide et al. 2001) while the new object was relatively square and not box-like. It measured roughly 1.5 meters by 1 meter by 1 meter.

The discovery of the large concreted metal object, later determined to be a winch, in close proximity to Ballast Cove Wreck A may point to the vessel's former function (Figure 4). Based on this information, the summer 2000 Dog Island Shipwreck Survey focused operations on two weeks of systematic mapping and recording the remains of this vessel. Work conducted at Ballast Cove consisted of three objectives: first, to map and identify features of Ballast Cove Wreck A, second, to determine if the metal winch (Figure 12) is associated with the hull, and third, to locate other sites with cultural materials.

A datum (Datum A) established at the base of the metal winch was used as a point of reference for recording the location of all excavation units, transects and artifacts. A baseline extended 50 meters along the wreck, from Datum A, maintained locational control within the site (Figure 4). It was later determined that the wreck lies almost exactly along a north-south axis. Divers visually surveyed the site to determine its extent as well as any other cultural features in proximity.

The methodologies used in Ballast Cove included hand fanning, probing, mapping and use of a 4-inch induction dredge and a ¼ inch screen. The dredge and screen were utilized for test excavation of 1x1 meter test units A and B (Figure 4). Six 1x1 meter units laid along the baseline provided archaeologists with much information pertaining to the nature of Ballast Cove Wreck A's structure. Four adjacent hand-fanned excavation units exposed wooden structure and planking near amidships (Figure 11). A fifth excavation unit contained the base of an endpost attached to the keel (Figure 13). Test Unit B demonstrated the probable association of the winch with the vessel. Each unit, mapped in detail, combined to create a preliminary site map including seven square meters of excavation units and some exposed hull structure (Figure 4).

General survey and diver transects identified other surface finds that may require additional investigation. To meet the third objective, locating other sites, further diver visual survey was conducted 25 meters from the baseline east and west of Datum A. This survey resulted in locating artifacts and ballast piles not likely associated with Ballast Cove Wreck A and demonstrated that there are several other potential sites within Ballast Cove that warrant further investigation as part of our ongoing research program (Meide et al. 2001).

Artifacts recovered during the visual survey include modern whiteware (Noël Hume 1970), the base of a stoneware vessel dating from the 19th century, as well as a 19th century lead glazed stoneware sherd the type Mocha (Noël Hume 1970), British transfer print sherds (Noël Hume 1970) dating 1780-1830, and Spanish majolica, probably of the Aucilla Polychrome type (Deagan 1987:76-77), dating 1650-1700 (Figures 5-8).

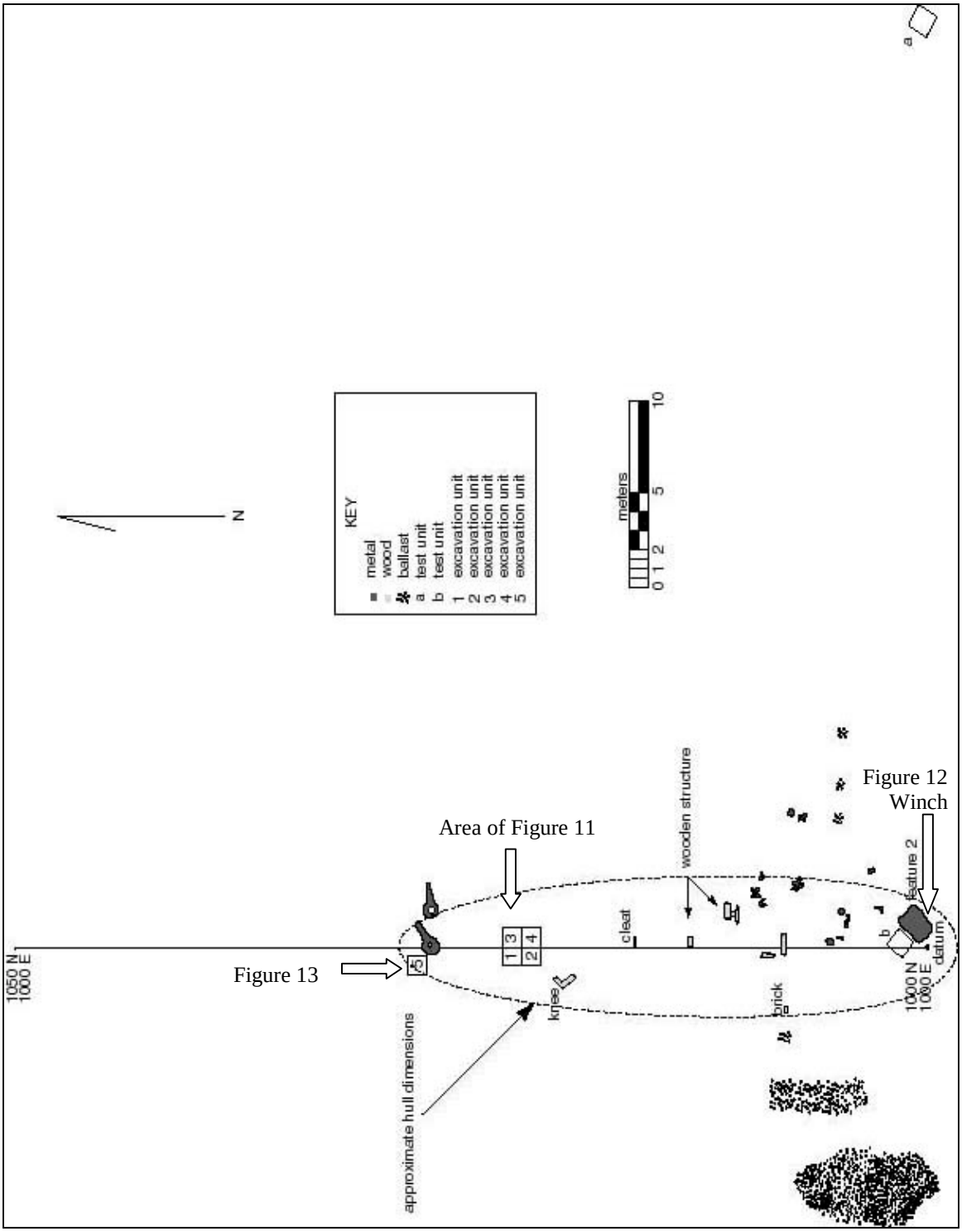

Figure 4. Site Plan

Note: outline of hull remains is a rough estimate to demonstrate the location of features and excavation units.

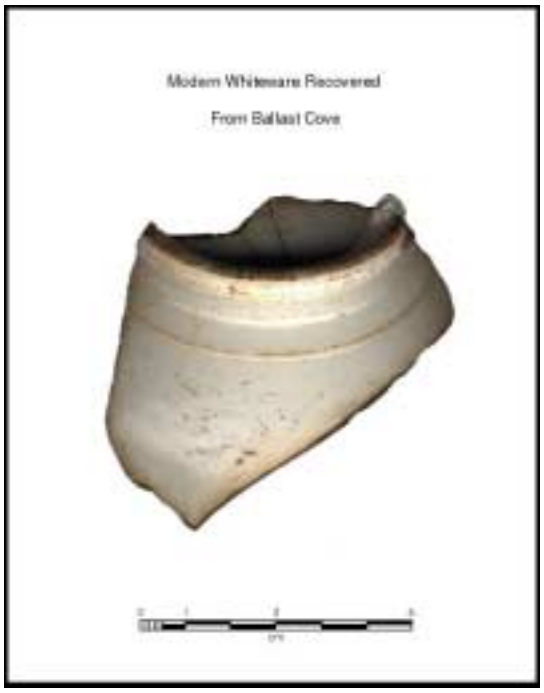

Figure 5. Modern whiteware from Ballast Cove (Noël Hume 1970) (PD/FS 1017-1).

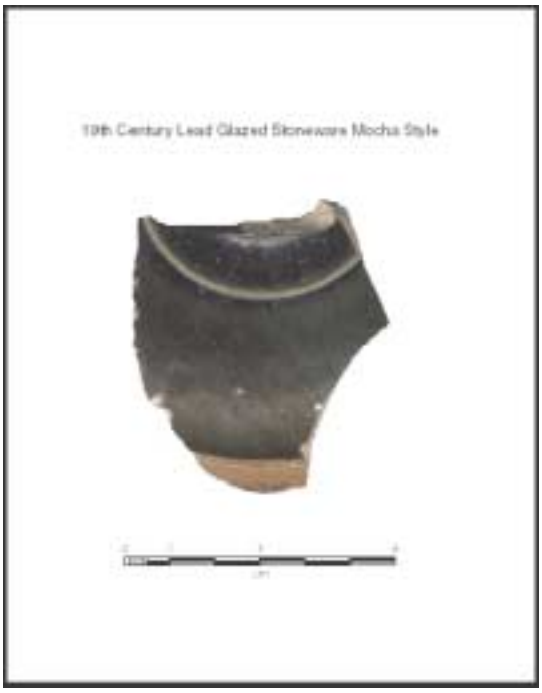

Figure 6. Lead Glazed Stoneware – 19th century (Noël Hume 1970) (PD/FS 1007-1).

Figure 7. Pearlware Transfer Print (Noël Hume 1970) (PD/FS 1008-1, 1010-1).

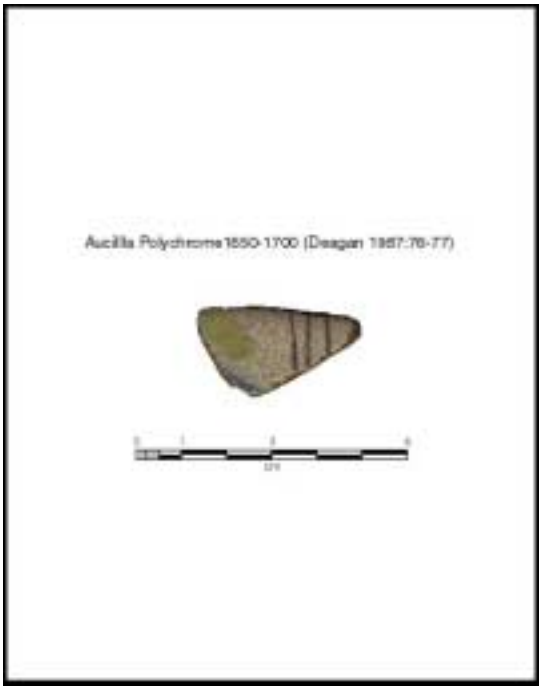

Figure 8. Spanish majolica – Aucilla Polychrome (PD/FS 1014-1).

The majority of the survey conducted in Ballast Cove centered on mapping and recording Ballast Cove Wreck A. Artifacts associated with the wreck included white ware ceramics, bricks, iron fasteners and additional pipe fragments (Figure 9). A glass bottle labeled "Joseph A. Campbell Preserve Company" was located near the north end of the baseline. This bottle dates between the late 1800's and early 1900's and may date Ballast Cove Wreck A although its association is equivocal (Figure 10). This survey provided archaeologists with enough information to begin to construct a map of Ballast Cove's cultural materials as well as the actual wreck boundaries.

Figure 9. 18-19th century pipe bowls and stem (Bradley 2000:106-108). (PD/FS 1000-3, 1003-3, 1009-3).

Figure 10. Glass bottle (PD/FS 1012-4).

Excavation units were placed according to exposed hull structure and features after delineating the extent of the wreck site. Four units placed along the baseline exposed structural components of the hull by utilizing hand fanning for excavation. Two units were located along the baseline 20 meters north of the metal winch and on the west side. Adjacent to the two western units, two additional units laid along the east side of the baseline. These four units, after excavation and detailed mapping, revealed the location of floor timbers and outer planking amidships (Figure 11). Another excavation unit placed at the southern end of the baseline at the datum and along the base of the metal winch revealed that the winch is probably associated with the hull structure (Figure 12).

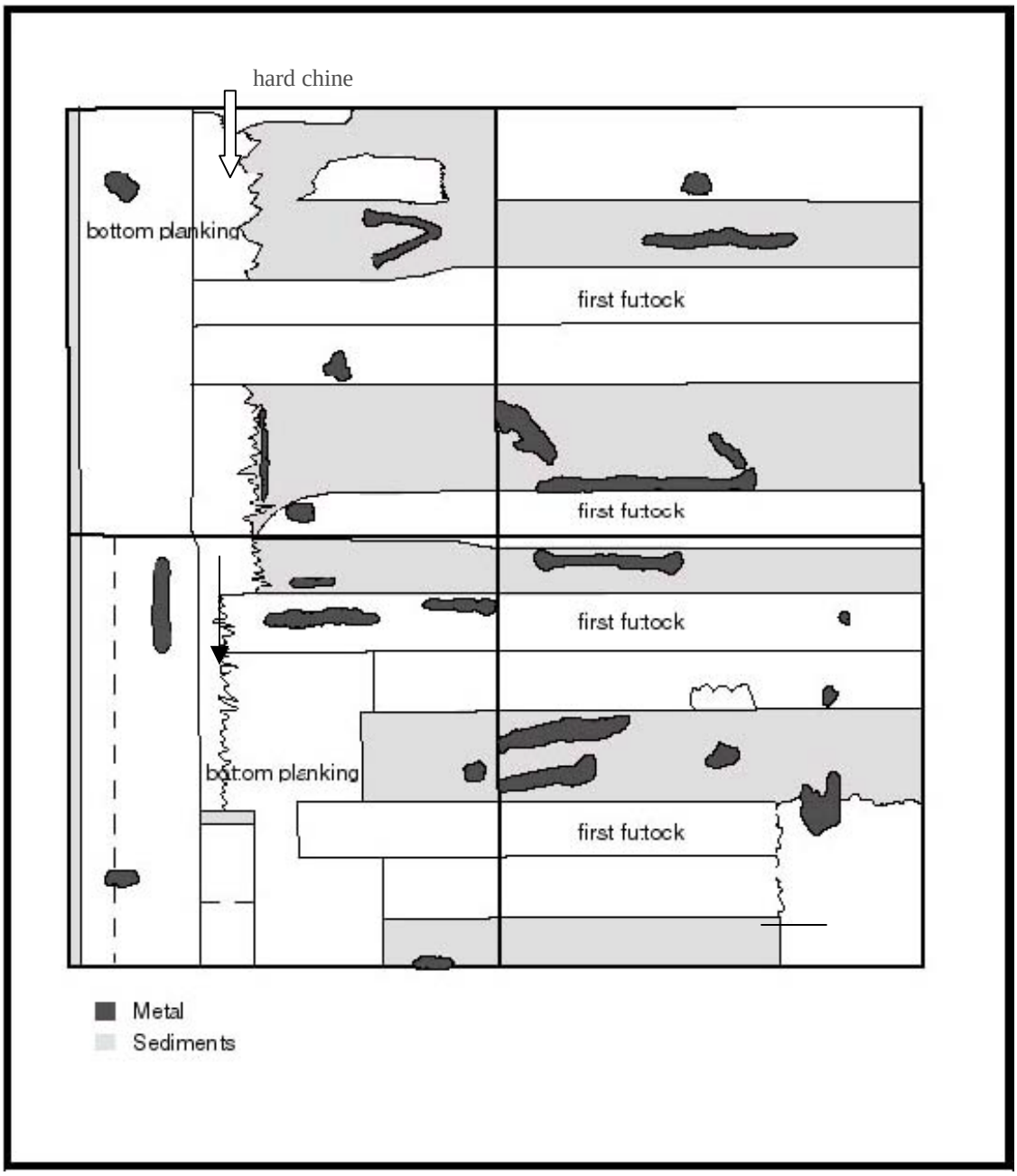

Figure 11. Plan view of planking and metal fasteners near amidships.

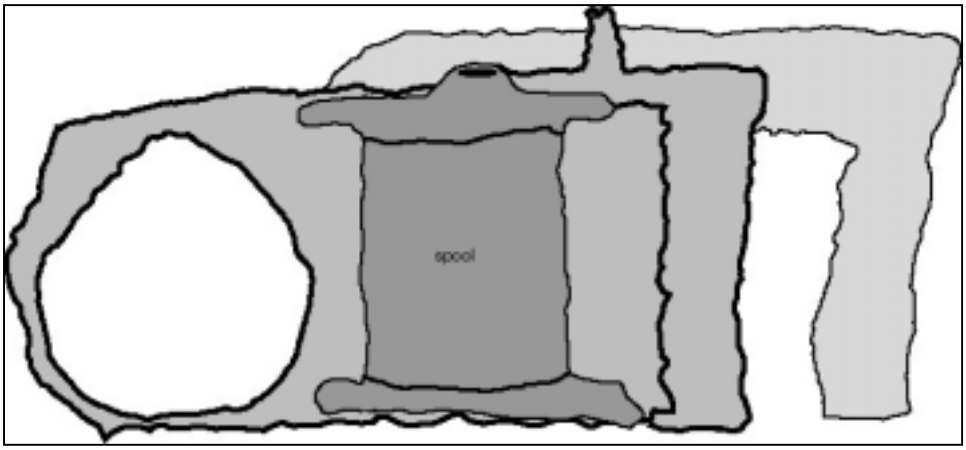

Figure 12. Metal winch.

A fifth excavation unit opened along the baseline 26 meters north of the datum revealed the association of the wreck with two large concreted teardrop-shaped artifacts that lay above the sand surface. Continued hand fanning in this unit located the remains of the stem or sternpost of this vessel. This endpost is fastened to the keel with copper fasteners and plates (Figure 13).

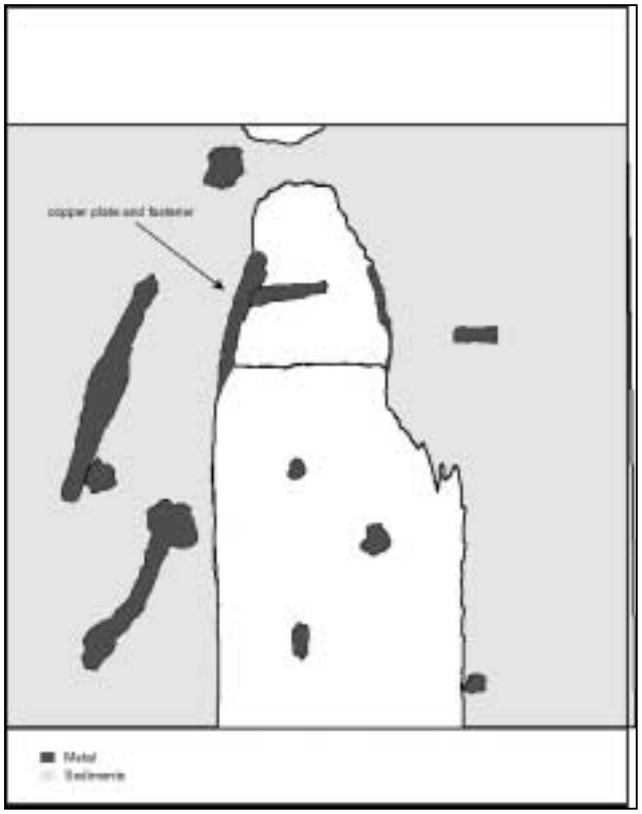

Figure 13. Endpost attached to keel with copper fasteners and plate.

Summary

Preliminary analysis indicates that the wooden hull of this vessel was constructed with iron fasteners (Figures 10, 11). While copper fasteners and plates have been located on one end of the vessel, no other copper fasteners or features have been located on the hull structure. Additionally, no treenails have been recorded. One puzzling feature is located amidships. The presence of a hard chine near the turn of the bilge indicates that this vessel may have been flat bottomed. However, the keel has not yet been located amidships. The winch, associated with the wreck, may point to the function of the vessel. Perhaps it functioned as a fishing smack or shrimper during the late 19th- early 20th century where a large winch would be necessary for reeling in nets. The hard chine is indicative of a flat-bottomed vessel that may have been used along the Gulf coastal waters rather than deeper offshore waters.

Ballast Cove is an excellent example of a multi-component underwater site that spans several hundred years of maritime interaction. The artifacts recovered indicate that human activities have continued in the area for an extended period of time and may be indicative of other wrecks in the area. Presently, one wreck has been investigated that may provide information on past human activities on Dog Island. Additional survey is necessary to determine the extent of cultural materials that exist within this natural harbor as well as the origin and function of the vessels already discovered.

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St. George Island

Background Research

In addition to operations conducted in Ballast Cove, the 2000 summer field season focused on the search for the remains of HMS *Fox* off St. George Island. William Augustus Bowles, the British loyalist, attempted to establish trade relations between Great Britain and his Native American allies as well as usurp the power of the burgeoning United States of America. In order to accomplish this feat, Bowles wanted to attack the Spanish in La Florida and capture this territory. The *Fox* was loaded with provisions including munitions and supplies to entice Native Americans into taking up arms against the Spanish and later the Americans. The *Fox* left Nassau, Bahamas and traveled up the Florida peninsula to attack the Spanish Fort San Marcos located at the confluence of the St. Marks and Wakulla Rivers. En route to St. Marks a terrific storm blew the *Fox* off course and onto a shoal or reef near the northeastern tip of St. George Island. Shipwrecked and devastated, Bowles would never realize his dream of an independent Muskogee Nation (Meide et al. 2001; Wright 1967).

HMS *Fox* is historically significant because of its association with Bowles. Had Bowles been able to take Spanish Florida and accomplish his goals, the history of the United States might have been completely different. Because the northeastern tip of St. George Island is actively accreting, it is possible that the wreck of the *Fox* was covered quickly by sediments after sinking (Faught and Damour 2001). If this is the case, the preservation of the wreck should be excellent and provide substantial data on the material culture of the 18th century as well as the vessel itself. The weapons and trade goods onboard the *Fox* at the time of its wrecking may still be detected by the magnetometer.

Research and Methodology

As part of the field school this year, the Dog Island Shipwreck Survey focused the last two weeks of the project on searching for the *Fox*. This year's search began by examining historic maps and the movement of the island since 1856. Because St. George is a barrier island, it has grown and moved substantially over the last 201 years. Recent publication of these maps, in a digitized format by the Department of Environmental Protection, has demonstrated to archaeologists the movement of the island since 1856. Based on this information it was possible to determine that the area of St. George previously examined by archaeologists and other individuals did not exist at the time of the wrecking event. There are three possible areas that may contain the remains of the vessel: first, the *Fox* may lie offshore on the Gulf Side of the former tip, second, the wreck may have been covered over by the island, and third the island has completely moved over the wreck and it now lies on the north side. In order to determine the location of this vessel, the 2000 survey systematically examined the waters off St. George using a marine magnetometer on both the Bay side and the Gulf side of the island (Figure 3). A terrestrial

magnetometer survey conducted on the Gulf side beach covered the terrestrial area that may contain artifacts. All data from the magnetometer surveys merged with GPS coordinates into a laptop computer could later be analyzed in the program *ArcView*®.

The magnetometer survey extensively covered the targeted area around St. George Island, identified as the probable location of HMS *Fox*. These operations involved running survey track lines, approximately 30 meters apart, roughly parallel to the shoreline in areas with high probability of anomalies (Figure 16). Anomalies were marked with buoys dropped both from the survey vessel and on interpretations of the geographic coordinates determined from the survey data. Recording concentrations of anomalies allowed for further investigation and testing by divers.

Figure 14. R/V *Seminole* towing the marine magnetometer at a distance of 50 meters.

Figure15. View from stern of *Seminole* showing towed marine magnetometer.

Testing methodologies used in the offshore survey included hand fanning, probing, boat and swimmer-towed magnetometer survey and underwater metal detectors. After anomalies were located with the magnetometer, deployed buoys marked areas of interest for investigation. Dive teams equipped with underwater metal detectors and probes examined these areas using compass controlled circle searches. Locations of possible magnetic anomalies marked with pin flags by one team allowed a second team of divers to later investigate by hand fanning or extensive probing. Hand fanning was the predominant method utilized for testing survey areas. A 1½-meter long probe was used for subsurface testing to locate artifacts or wooden structure embedded in sand and clay layers. When pushed below the sediment surface, any dense materials such as wood or metal can be detected when contacted by the probe.

Marine Survey

The first marine survey conducted on the bayside (North side) of the island utilized a Geometrics 866 proton procession magnetometer towed 40 meters behind an 18-foot boat. Small anomalies registering less than 50 gammas, located with the magnetometer, were examined by archaeologists but proved insignificant.

The final marine-based survey took place on the Gulf side of St. George Island from July 18 through July 31. As with the first marine survey on the bayside, the Geometrics 866 proton procession magnetometer was operated in conjunction with GPS. Using the 50-foot Research Vessel *Seminole*, the magnetometer was towed 50 meters behind the boat (Figures 14, 15). This vessel also served as the working platform for conducting diver reconnaissance and testing of anomalies. This portion of the survey continued for several

days and any hits observed during the survey were buoyed and later examined by divers using hand-held underwater metal detectors. Divers conducted circle searches looking for features and hand fanned the seafloor for any artifacts.

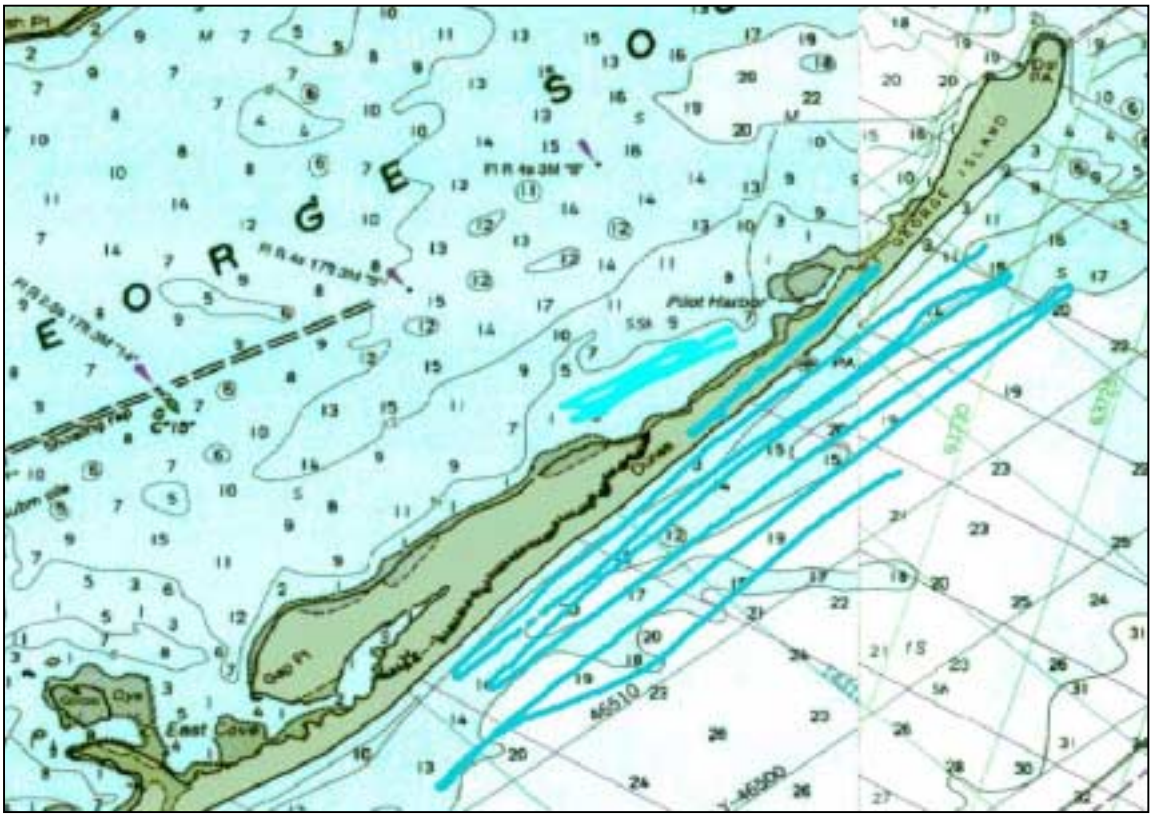

Figure 16. Marine and terrestrial magnetometer tracklines behind, on, and in front of St. George Island.

Several significant targets are located in a clustered area thought to be in proximity to the 1799 tip of St. George Island. Divers with metal detectors, on loan from the South Eastern Archaeological Center, thoroughly examined these targets although with no positive results. The targets however, were not visible on the surface, and the metal detectors could not penetrate the sediments to locate subsurface cultural materials. These targets were re-examined several times by swimming the magnetometer head in these areas and each time a significant reading was registered. The data acquired during this portion of the survey was examined individually to determine the significance of the gamma readings recorded. These anomalies are located offshore of St. George Island (Figure 17). Anomalies registering between 49022 to 49097 gammas are displayed as yellow circles on the nautical chart. Five magnetometer readings registering over 100 gammas were also recorded and are indicated by blue triangles. The entire area of anomalies is approximately 130 meters in width. Unfortunately, because of time constraints and weather, test units at the location of these targets could not be excavated. While no historic artifacts were located, two prehistoric period ceramic sherds and a piece of burned bone recovered in the area during diver visual surveys represent prehistoric human occupation of this area although its context in marine sediments is likely reworked (Figure 18).

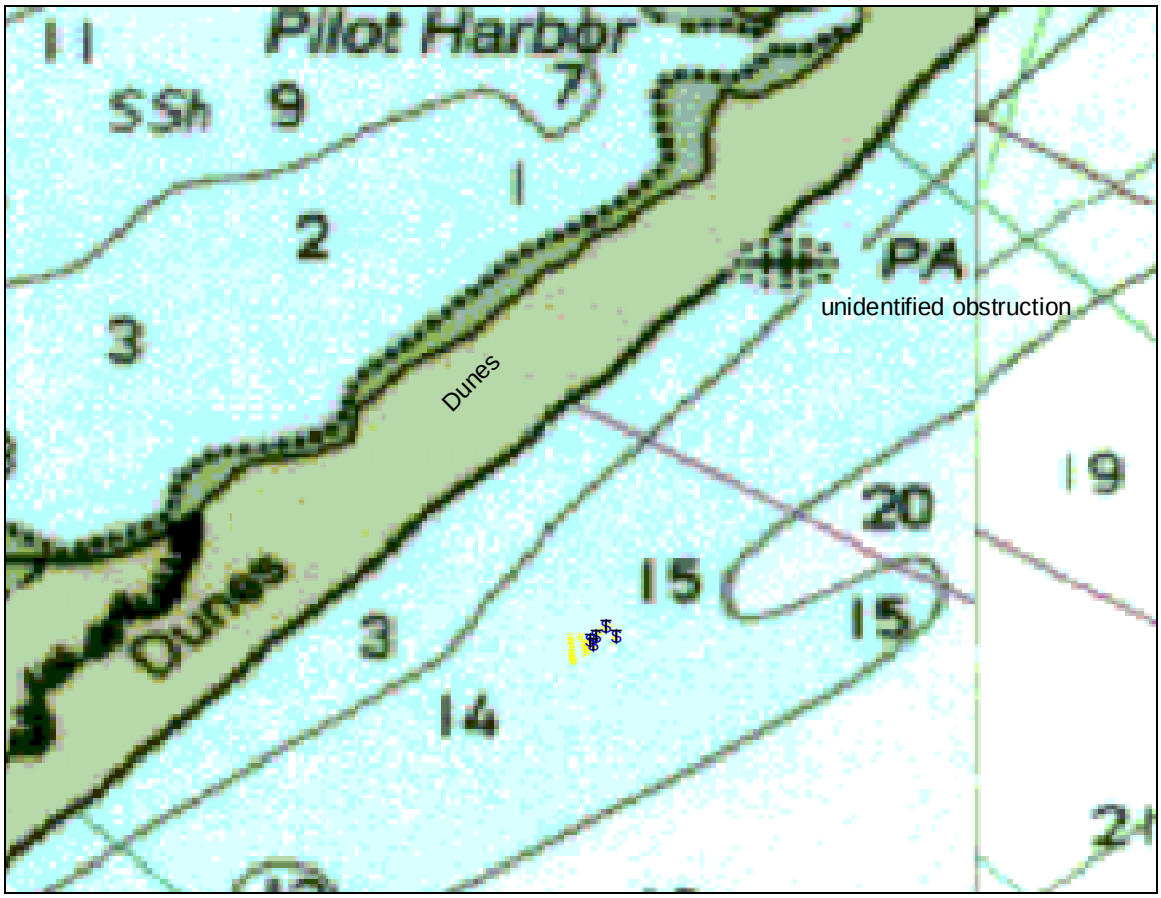

Figure 17. Location of large anomalies. Yellow circles indicate gamma readings between 49022-49097 while blue triangles show gamma readings registering between 49118-49183.

Figure 18. Prehistoric sherds located off St. George Island.

Terrestrial Survey

The terrestrial magnetometer and pedestrian survey followed using a Geometrics 856 proton procession magnetometer. Systematic survey along the beach from Sugar Hill to the area of Marsh Island occurred on July 27 and 28 within St. George Island State Park (Figure 16). Because of the sensitive nature of the wildlife and environment during the summer months, no intrusive investigations were conducted at the park. Using pace and compass to determine track lines, magnetometer readings were taken every 15 meters. A hand-held Lowrance GlobalNav 100 GPS maintained locational control of each magnetometer reading. Both data sets merged into a laptop for later analysis. A total of 9285 square meters (1.67 linear miles) were investigated during the two days of the survey.

Analysis of the data indicates that several anomalies exist in the project area. Data were plotted in *ArcView*® in order to determine the location and size of the magnetometer readings. Each of the magnetometer readings was examined individually to determine the size of the gammas recorded during the survey. Gamma readings were judged based on the size of the reading in relation to the earth's local ambient magnetic field of 49000 gammas although the ambient field approaches less than 49000 toward the east. These gamma readings indicate that several anomalies exist along the beachfront. Figure 19 shows the survey area with the anomalies recorded during the fieldwork. Readings recorded during the survey are indicated by the yellow circles and range between 48000

and 49188 gammas. The anomalies indicated by red triangles are readings that are either smaller than 48000 or larger than 49188 gammas. While some of these anomalies are scattered throughout the survey area several of these readings indicate areas that may need to be tested. Two clusters exist in the survey area. A clustering of these anomalies exist around an unidentified obstruction located near the beachfront and may be associated with this feature. Another cluster exists approximately 550 meters southwest of the unidentified obstruction. These anomalies may be related to cultural features buried below the sand surface or are corrupted readings. These targets need to be tested in order to determine their nature.

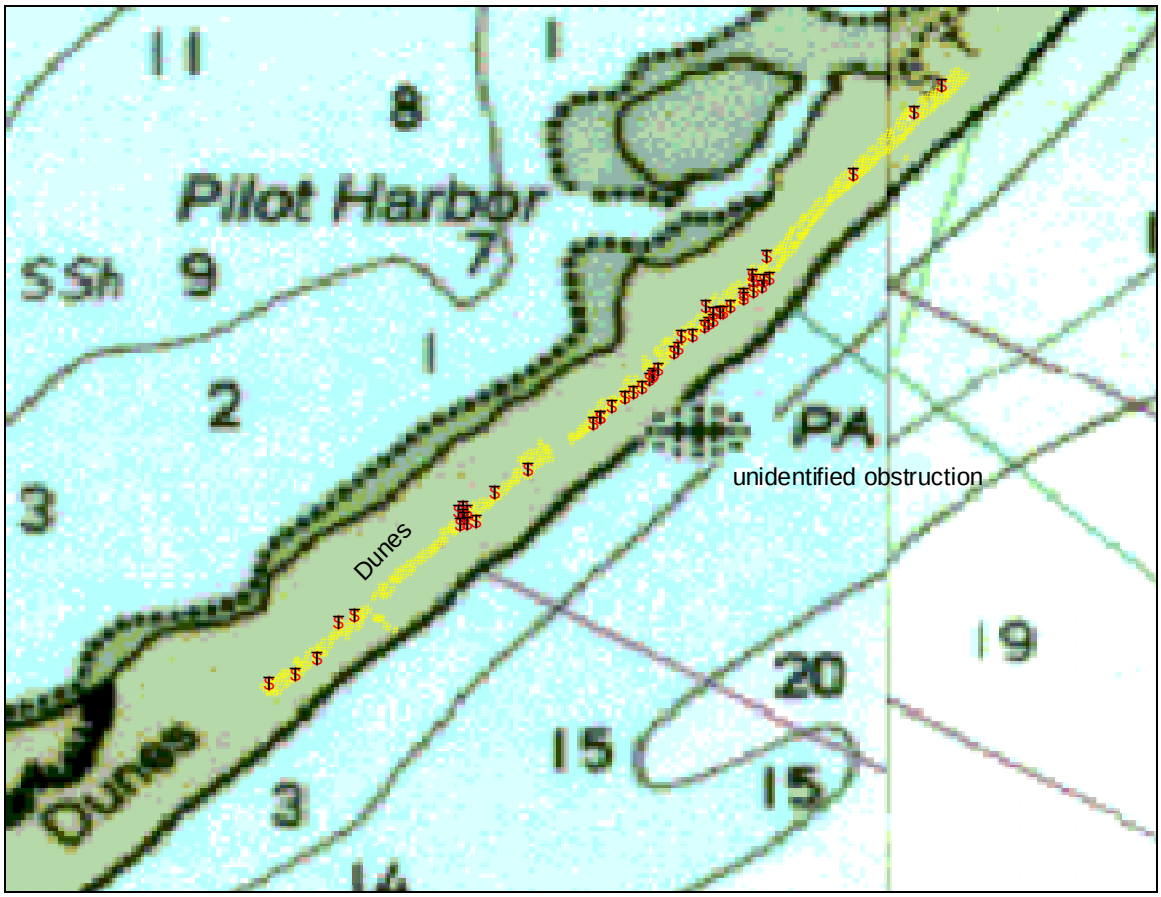

Figure 19. Terrestrial magnetometer readings indicated by yellow dots. Red triangles indicate possible large readings or anomalous readings. Note the clusters of anomalies.

Summary

These targets provide an interesting opportunity to continue research into the location of the remains of the *Fox*. All magnetometer data has been archived in the George R. Fischer Lab of Underwater Archaeology and available for future study. Florida State University's Program in Underwater Archaeology has applied for a Survey and Planning Grant for the summer of 2001. FSU has also recently purchased a Geometrics optically pumped cesium beam magnetometer and a sub-bottom profiler. Both tools will be used to further test these areas offshore as well as delineate locations for future investigation. Additionally, further research into the geomorphology of St. George Island may provide insight into the location of this wreck. Continued research is of the utmost importance in

gaining a greater understanding of the submerged cultural resources around St. George Island.

Conclusions

The Dog Island Shipwreck Survey has provided important information about the archaeological record within the survey area. Further work however, is necessary to determine the origin, function, and nationality of the vessel that lies at the bottom of Ballast Cove. Other sites within Ballast Cove will be located, investigated and recorded to comprehend the dynamics of this natural harbor and how it has been exploited historically as well as its role in the greater anthropological framework of the Florida Panhandle economic system.

Other previously recorded sites on Dog Island should also be further investigated. The Dog Island II site (8FR343), consisting of the remains of a prehistoric dugout canoe discovered in the late 1960's, and other artifacts including Fort Walton Incised and Check-Stamped pottery, has not been investigated since 1979. The East Pass Wreck (8FR813) should also be relocated and investigated. A thorough archaeological survey should be conducted to locate and catalogue the submerged cultural remains on and around Dog Island as well as those lying off St. George Island.

Further recording of the Lanark Reef LCM would be useful to determine the identity of this vessel and how it was deposited into the archaeological record. Future monitoring of this site is necessary to document its site formation processes and ongoing degradation.

Research off St. George Island will continue surveys for HMS *Fox* as a part of the FSU Field School in Underwater Archaeology. Other submerged cultural resources discovered as a result of remote sensing surveys will also be catalogued and recorded for future investigation. Student and volunteer involvement as well as cooperation with state and local authorities are important in order to conduct these investigations of submerged cultural resources around the barrier islands of Franklin County, Florida.

Appendix A

Table 1. Artifact Inventory

Location	Material	Number	Time Period	Comments
Ballast Cove	brick	14	Historic	screened, surface collection
Ballast Cove	wood	1	Unknown	transect collection
Ballast Cove	glass	4	Historic	screened , transect collection
Ballast Cove	ceramics	13	Historic	incl. transfer prints, majolica, modern
Ballast Cove	lithic	12	Prehistoric/Historic	chert, granite, slate, other
Ballast Cove	metal	1	Historic	assoc. w/ shipwreck?
Ballast Cove	tile	13	Historic	screened, transect collection
Ballast Cove	Kaolin pipe	6	Historic	decor. and undec. 3 bowls and 3 stems
Ballast Cove	stoneware	1	Historic-Modern	base, surface collection
St. George Isl.	pottery	3	Prehistoric	surface collection
St. George Isl.	bone	2	Unknown	surface collection, unknown species

Appendix B

Table 2. Artifacts and provenience.

Unit or other	Location	Contents or Material	Comments or Description
Surface Collection	Surface	Decorated pipe bowl	
Test Unit A	Level 1 (0-10cm)	13 Brick Fragments	1/4 Inch Screened Artifacts
Test Unit A	Level 1 (0-10cm)	2 Slate Fragments	1/4 Inch Screened Artifacts
Test Unit A	Level 1 (0-10cm)	1 Worn Glass Fragment	1/4 Inch Screened Artifacts
Test Unit A	Level 1 (0-10cm)	2 Ceramic Sherds	1/4 Inch Screened Artifacts
Test Unit A	Level 1 (0-10cm)	2 Chert Fragments	1/4 Inch Screened Artifacts
Test Unit A	Level 2 (10-20cm)	1 Chert Fragment	1/4 Inch Screened Artifacts
Test Unit A	Level 2 (10-20cm)	Concretion	1/4 Inch Screened Artifacts
Test Unit A	Level 2 (10-20cm)	3 Granite Pieces	1/4 Inch Screened Artifacts
Test Unit A	Level 2 (10-20cm)	4 Tile Pieces	1/4 Inch Screened Artifacts
Test Unit A	Level 2 (10-20cm)	1 Ceramic Sherd	1/4inch Screened Artifacts- UnID Lead Glaze
Test Unit A	Level 2 (10-20cm)	1 Ceramic Sherd	1/4 Inch Screened Artifacts- UnID Whiteware
Test Unit A	Level 2 (10-20cm)	1 Ceramic Sherd	1/4 Inch Screened Artifacts- UnID Stoneware
Surf Coll	Surface	Undecorated Pipe Bowl Fragment	10cm S.E. of Test Unit A
Surf Coll	Surface	Large Vessel Base	Stoneware- 43 M. E of Feature 2 (box)
Surf Coll	Surface	Pipe Stem	1/4 Inch Screened Artifacts
Surf Coll	Surface	Pipe Bowl	55.27cm. N. of Feature 2 (box)
Test Unit B	Level 1 (0-10cm)	8 Tile(?) Fragments	1/4 Inch Screened Artifacts
Unit 1020N 1001E	Level 1 (0-10cm)	Green Glass	Hand Fanning
Unit 1020N 1001E	Level 1 (0-10cm)	Brick Fragment	Hand Fanning
Unit 1020N 1001E	Level 1 (0-10cm)	Tile Fragment	Hand Fanning

Surf Coll	Surface	Ceramic with Green Glaze	100cm N 97cm East
Surf Coll	Surface	Ceramic B/W	89cm SE (310 degrees) off datum
Surf Coll	Surface	Pipe Stem	6M. N of Datum, 28M. West
Surf Coll	Surface	Ceramic B/W Transfer Print	?
Surf Coll	Surface	3 Chipped Stone	6M. N of Datum, 20M. West
Surf Coll	Surface	"Campbell's" Bottle	11M. N of Datum, 10M. West
Surf Coll	Surface	Ballast, Granite	24M. N of Datum, 6M. West
Surf Coll	Surface	Ceramic (Majolica ?)	24M. N of Datum, 6M. West
Surf Coll	Surface	Glass Fragment	22M. N of Datum, 10M. West
Surf Coll	Surface	Rim Fragment, ceramic	18M. N of Datum, 6M. West
Surf Coll	Surface	Base Whiteware	24M. N of Datum, 8M. West
Surf Coll	Surface	Pipe Stem	8cm. N of Datum, 12cm. West
Surf Coll	Surface	Wood Fragment	29' 43.770N lat / 84' 43.465W long
Surf Coll	Surface	Ceramic	8M. N of Datum, 5M. West
Surf Coll	Surface	Ceramic Base	7.6M. N of Datum, 5M. West
Surf Coll	Surface	Prehist Sherd Rim	83M. WNW of Buoy 19
Surf Coll	Surface	Prehist Sherd Rim w/ surf. decor.	Off Buoy 33
Surf Coll	Surface	Prehist Sherd	Off Buoy 33
Surf Coll	Surface	Bone	Near unit 1
Surf Coll	Surface	Bone	Near unit 1

Appendix C

Table 3. Provenience Designation and Field Specimen Numbers

Date	PD	FS	Site	Location	Artifacts
02/19/00	1000	3	Ballast Cove	Surface Coll.	Decorated pipe bowl
02/26/00	1001	6	Ballast Cove	Test unit A	13 brick fragments
02/26/00	1001	7	Ballast Cove	Test unit A	2 slate fragments
02/26/00	1001	4	Ballast Cove	Test unit A	1 worn glass fragment
02/26/00	1001	1	Ballast Cove	Test unit A	2 ceramic sherds
02/26/00	1001	11	Ballast Cove	Test unit A	2 chert fragments
02/26/00	1002	4	Ballast Cove	Test unit A	1 chert fragment
02/26/00	1002	5	Ballast Cove	Test unit A	Metal concretion
02/26/00	1002	10	Ballast Cove	Test unit A	3 granite fragments
02/26/00	1002	1	Ballast Cove	Test unit A	4 tile fragments
02/26/00	1002	1	Ballast Cove	Test unit A	1 ceramic sherd
02/26/00	1002	1	Ballast Cove	Test unit A	1 ceramic sherd
02/26/00	1002	1	Ballast Cove	Test unit A	1 ceramic sherd
02/26/00	1003	3	Ballast Cove	Surface Coll.	Undecorated pipe bowl fragment
07/05/00	1004	1	Ballast Cove	Surface Coll.	Large vessel base
07/05/00	1004	3	Ballast Cove	Surface Coll.	Pipe stem
07/05/00	1004	3	Ballast Cove	Surface Coll.	Pipe bowl
07/06/00	1005	1	Ballast Cove	Test unit B	8 tile(?) fragments
07/08/00	1006	4	Ballast Cove	Unit 1020N 1001E	Green glass
07/08/00	1006	6	Ballast Cove	Unit 1020N 1001E	Brick fragment
07/08/00	1006	1	Ballast Cove	Unit 1020N 1001E	Tile fragment
07/11/00	1007	1	Ballast Cove	Surface Coll.	Ceramic with green glaze
07/11/00	1008	1	Ballast Cove	Surface Coll.	Ceramic, blue and white
07/11/00	1009	3	Ballast Cove	Surface Coll.	Pipe stem
07/11/00	1010	1	Ballast Cove	Surface Coll.	Ceramic, blue/white Transfer Print
07/11/00	1011	11	Ballast Cove	Surface Coll.	3 chipped stone
07/11/00	1012	4	Ballast Cove	Surface Coll.	“Campbells” glass bottle
07/15/00	1013	10	Ballast Cove	Surface Coll.	Ballast, granite
07/15/00	1014	1	Ballast Cove	Surface Coll.	Ceramic, majolica (Aucilla Poly)
07/15/00	1015	4	Ballast Cove	Surface Coll.	Glass fragment
07/15/00	1016	1	Ballast Cove	Surface Coll.	Ceramic, rim fragment
07/15/00	1017	1	Ballast Cove	Surface Coll.	Ceramic base, whiteware
07/18/00	1018	3	Ballast Cove	Surface Coll.	Pipe stem
07/19/00	1019	9	Ballast Cove	Surface Coll.	Wood fragment
07/22/00	1020	1	Ballast Cove	Surface Coll.	Ceramic
07/22/00	1021	1	Ballast Cove	Surface Coll.	Ceramic base
07/20/00	1500	2	St. George Island	Surface Coll.	Prehistoric sherd, rim
07/24/00	1501	2	St. George Island	Surface Coll.	Prehistoric sherd rim w/ surf décor
07/24/00	1502	2	St. George Island	Surface Coll.	Prehistoric sherd
07/27/00	1503	8	St. George Island	Surface Coll.	Bone
07/27/00	1504	8	St. George Island	Surface Coll.	Bone

References Cited

Bradley, Charles S.
2000 Smoking Pipes for the Archaeologist. In K. Karklins (ed.), *Studies in Material Culture Research*, pp. 104-133. Society for Historical Archaeology, California, PA.

Brewer, David M.
1982 A Progress Report on Work Conducted in the Search for the *Fox* During 1981. Report prepared by the Academic Diving Program, Florida State University. On file at the Department of Anthropology, Florida State University, Tallahassee.

Damour, Melanie
1998-2000 Field Notes, various projects under the auspices of the FSU class ANT 4131: *Techniques of Underwater Site Research*. Pages 66a-67a are concerned with the Lanark LCM site (19 February 2000). On file at the Department of Anthropology, Florida State University, Tallahassee.

Deagan, Kathleen
1987 *Artifacts of the Spanish Colonies of Florida and the Caribbean, 1500-1800: Vol. 1: Ceramics, Glassware, and Beads.* Smithsonian Institute Press, Washington, D.C.

Faught, Michael and Melanie Damour
2001 Of Ships and Shifting Sands: The Geoarchaeology of St. George and Dog Islands and its Relation to the Shipwreck Record. Paper presented at the Society for Historical Archaeology Conference, Long Beach, CA. On file at the Department of Anthropology, Florida State University, Tallahassee.

Florida Department of Environmental Protection
2000 http://bcs.dep.state.fl.us/counties/HSSD/drawings/draw2779/. Website containing historic shoreline maps of Florida. File "frkxr125.zip". Office of Beaches and Coastal Systems.

Horrell, Christopher E. and Melanie Damour
2001 Florida State University's Continued Archaeological Investigations: The Dog Island Shipwreck Survey. Paper presented at the Society for Historical Archaeology Conference, Long Beach, CA. On file at the Department of Anthropology, Florida State University, Tallahassee.

Meide, Charles, James McClean and Edward Wiser
2001 Dog Island Shipwreck Survey 1999: Report of Historical and Archaeological Investigations. Edited by Michael K. Faught, Jennifer McKinnon, William Hoffman and Joseph K. Latvis. Research Reports No. 4. Prepared by the Department of Anthropology, Florida State University, submitted to the Florida Bureau of Archaeological Research, Tallahassee.

Noël Hume, Ivor
1970 *A Guide to Artifacts of Colonial America*. Alfred A. Knopf, New York.

Palmer, Thadra
1997 A Synthesis of Work Conducted on Middle Pass Between Dog Island and St. George Island. Report prepared by the Department of Anthropology, Florida State University and submitted to the Florida Bureau of Archaeological Research, Tallahassee.

White, Nancy Marie, Keith D. Ryder, Scott M. Grammer, and Karen L. Mayo
1995 Archaeological Survey of Dog Island, Franklin County, Florida. Report prepared by the Department of Anthropology, University of South Florida, submitted to the Florida Bureau of Archaeological Research, Tallahassee.

Wright, James Leitch Jr.
1967 *William Augustus Bowles: Director General of the Creek Nation*. University of Georgia Press, Athens.