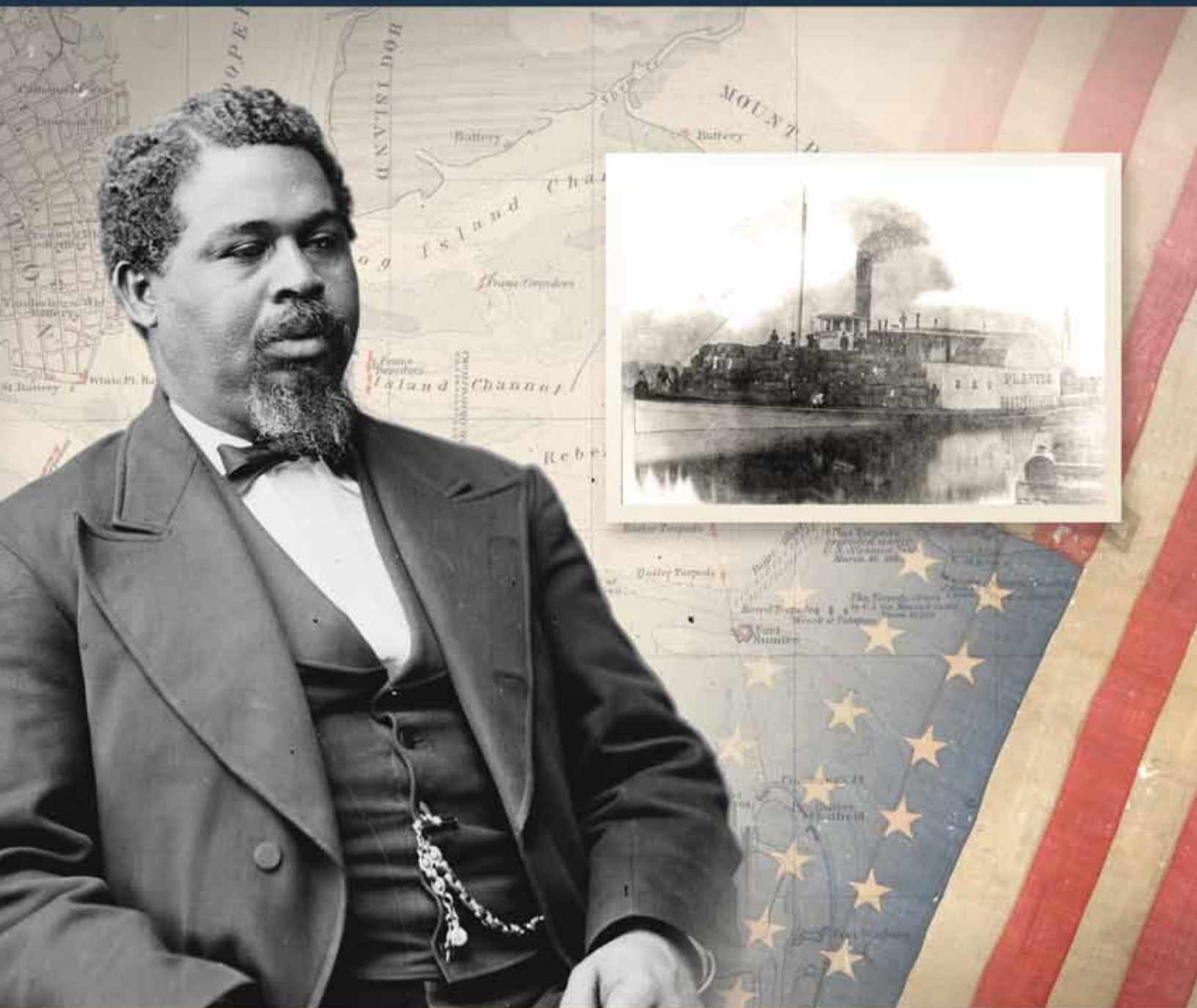


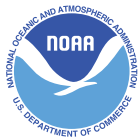
THE SEARCH FOR *PLANTER*

The Ship that Escaped Charleston and Carried Robert Smalls to Destiny



MAY 2014

BRUCE G. TERRELL, GORDON P. WATTS & TIMOTHY J. RUNYAN



National Marine Sanctuaries
National Oceanic and Atmospheric Administration

MARITIME HERITAGE PROGRAM SERIES: **NUMBER 1**

The Maritime Heritage Program works cooperatively and in collaboration within the Sanctuary System and with partners outside of NOAA. We work to better understand, assess and protect America's maritime heritage and to share what we learn with the public as well as other scholars and resource managers.

This is the first volume in a series of technical reports that document the work of the Maritime Heritage Program within and outside of the National Marine Sanctuaries. These reports will examine the maritime cultural landscape of America in all of its aspects, from overviews, historical studies, excavation and survey reports to genealogical studies.

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NOAA National Marine Sanctuary Program
2014
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Silver Spring, Maryland 20910

ABSTRACT



The sidewheel steamer *Planter* gained national fame when a group of enslaved African Americans commandeered the Confederate ship and made a successful flight to freedom. Under the leadership of Robert Smalls, the ship's wheelsman and an African American, crew members navigated the steamer out of Charleston Harbor and delivered the vessel to the United States Navy. This report focuses on the history and archaeological survey of the famous American Civil War vessel, including *Planter's* commercial and naval career, the story of Robert Smalls and his comrades, and the postwar shipwreck of the steamer. The report addresses the wreck of *Planter* and the probable location of the vessel's remains today, as well as the archaeological search for those remains and the subsequent changes in the coastal environment since the sinking in 1876. The report concludes with investigative recommendations on *Planter*, a historic ship telling a significant and timeless story of human hope and courage in the face of adversity.

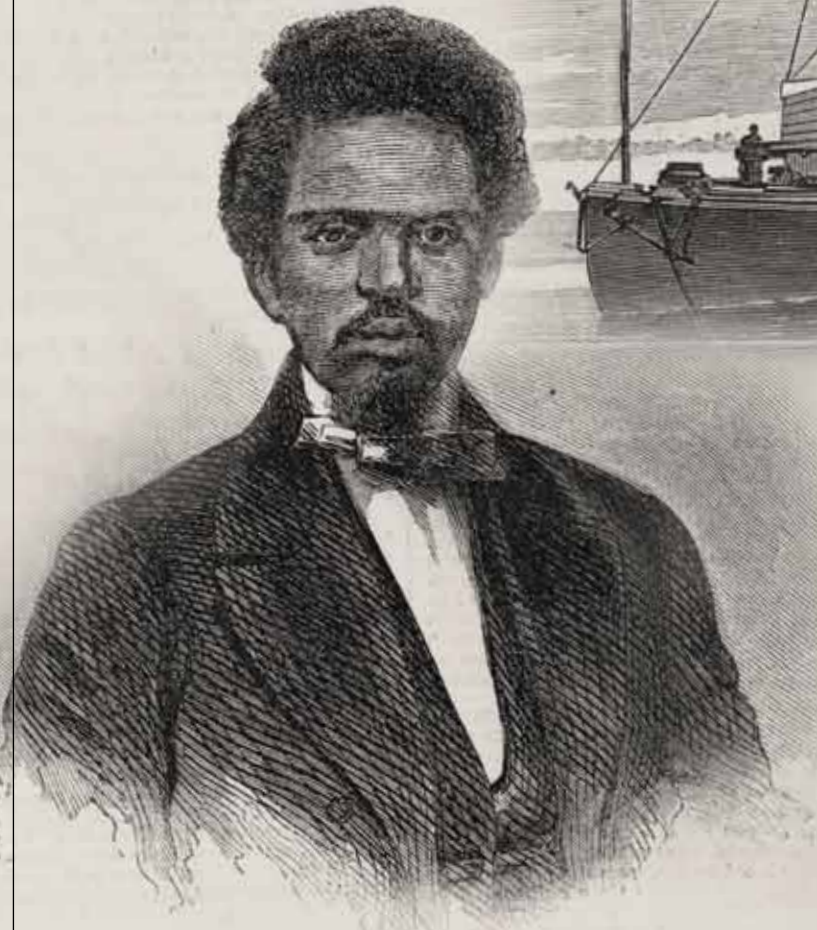
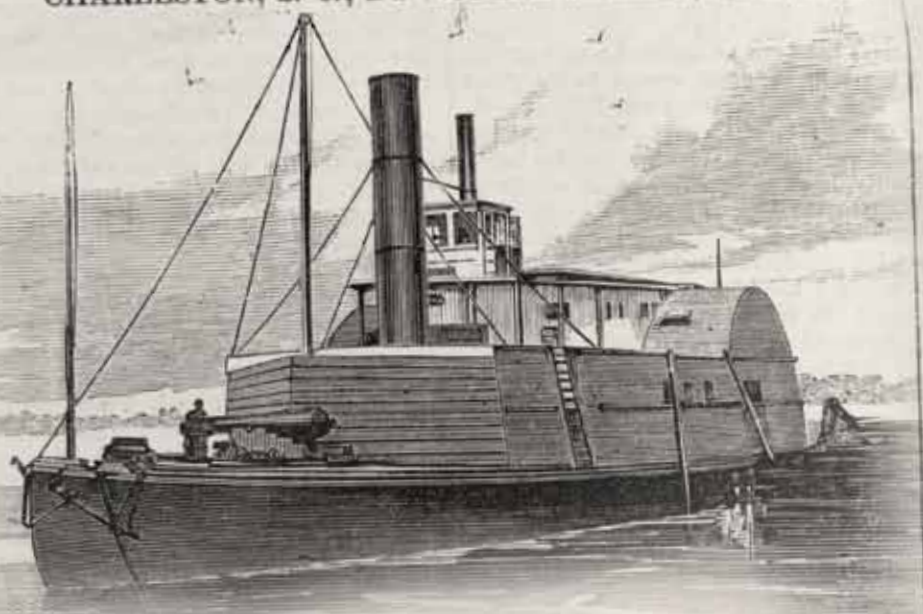
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THE GUN-BOAT "PLANTER," RUN OUT OF CHARLESTON, S. C., BY ROBERT SMALLS, MAY, 1862.



ROBERT SMALLS, CAPTAIN OF THE GUN-BOAT "PLANTER."

THE STEAMER "PLANTER" AND HER CAPTOR.

WE publish herewith an engraving of the steamer *Planter*, lately run out of Charleston by her negro crew, and a portrait of her captain, ROBERT SMALLS—both from photographs sent us by our correspondent at Hilton Head. The following, from _____ will explain the trans-

The following are the names of the black men who performed this gallant and perilous service: Robert Smalls, pilot; John Smalls and Alfred Gradine, engineers; Abraham Jackson, Gabriel Turno, William Morrison, Samuel Chisholm, Abraham Allston, and David Jones. They brought with them the wife and three children of the pilot, and the wife, child, and sister of the first engineer, John Smalls. The balance of the party were without families.

The *Planter* is a high-pressure, side-wheel steamer, one hundred and forty feet in length, and about fifty feet beam, and draws about five feet of water. She was built in Charleston, was formerly used as a cotton-boat, and is

FORWARD

To many observers Robert Smalls was the first African American hero of the Civil War. On the broader stage, he was known as a military hero -- "General" Robert Smalls -- who fought in eleven battles on the CSS *Planter* and the USS *Keokuk* and was a charismatic leader who recruited African American men into the United States Army to fight for their freedom. On the social and political front he was Congressman Robert Smalls, whose bill in the South Carolina Legislature brought compulsory education to the state prior to his election to the U.S. House of Representatives, where he served five terms there representing his district in the "Low Country." But to me and others in our family of direct descendants of Robert Smalls, he was "Grampa." Being the great-granddaughter of Robert Smalls has been a life journey, one that shaped who I am and what is important to me as a woman, a mother, and a descendant of the "Low Country." Freedom, education and civil rights for all were important values to Grampa, and as a result they are important to me. These values have been passed down through the family generations, and I have passed them on to my son and daughter, who in turn pass them on to their children.

I am blessed to have been born into the Robert Smalls family. His work on the *Planter* and in the Low Country fills me with great pride.

Helen Boulware Moore, Ph.D.

Great-granddaughter of Robert Smalls

Curator of the Robert Smalls Traveling Exhibit, "The Life and Times of Congressman Robert Smalls"



When ordinary men and women step forward and do extraordinary things, the story of the human race takes a quantum leap forward. In 1862 Robert Smalls was a slave assigned to steer the CSS *Planter*, an armed Confederate military transport. One night after *Planter's* white officers decided to spend the night ashore, Smalls commandeered the vessel with a hardy band of ordinary men, women and children; their escape voyage freed themselves and helped free their nation from the bondage of slavery.

Today men and women from different cultural and ethnic backgrounds -- some of them the sons and daughters of either former slaves or slave owners -- join in the effort to locate the ship and tell the story of those ordinary men and women, indelibly intertwined with the *Planter*. While rediscovering the *Planter*, professionals and volunteers of National Oceanic Atmospheric Administration (NOAA) and the National Association of Black Scuba Divers (NABS) joined forces to shed light on this critical aspect of African American maritime history unknown to most of the world. The story of the quest for the steamer *Planter* and all that it represents is a treasure that unites our lives and shared destinies.

William A. Murray

On behalf of the National Association of Black Scuba Divers

by Captain Relay, of the Confederate navy—all the other employes of the vessel, excepting the first and second mates, being persons of color.

Robert Smalls, with whom I had a brief interview at General Benham's head-quarters this morning, is an intelligent negro, born in Charleston, and employed for many years as a pilot in and about that harbor. He entered upon his duties on board the *Planter* some six weeks since, and, as he told me, adopted the idea of running the vessel to sea from a joke which one of his companions perpetrated. He immediately cautioned the crew against alluding to the matter in any way on board the boat, but

on the following morning for Fort Ripley, and to be absent from the city for some days. The families of the contrabands were notified and came stealthily on board. At about three o'clock the fires were lit under the boilers, and the vessel steamed quietly away down the harbor. The tide was against her, and Fort Sumter was not reached till broad daylight. However, the boat passed directly under its walls, giving the usual signal—two long pulls and a jerk at the whistle-cord—as she passed the sentinel.

Once out of range of the rebel guns the white flag was raised, and the *Planter* steamed directly for the blockading steamer *Augusta*. Captain Parrott, of the latter ves-

INTRODUCTION



The saga of Robert Smalls' rise to history is entwined with the small coastal steambot *Planter*. Through an Initiative called the Voyage to Discover, NOAA's Office of National Marine Sanctuaries joined the National Association of Black SCUBA Divers (NABS) and the Bill Murrain Foundation to collaborate with the Institute for International Maritime Research, Inc. (IIMR) of Washington, North Carolina for the purpose of researching the history of the steamer *Planter*, determining the present location of the vessel's remains, and identifying them. To that end, the National Oceanic and Atmospheric Administration (NOAA) and IIMR conducted an investigation off Cape Romain, South Carolina to locate the steamer's remains. This investigation was conducted under a permit from the South Carolina Institute of Archaeology and Anthropology. The survey location was identified by historical and cartographic research carried out by NOAA. IIMR implemented a remote-sensing survey using cesium magnetometer and high-resolution side-scan sonar to cover that area as well as an extension of the original site.

Historical research carried out by NOAA's Maritime Heritage Program documented *Planter's* history. That research also identified numerous details associated with the vessel's loss in March 1876 and subsequent efforts to salvage the wreck. Historical records contained information on *Planter's* specifications and the design of its steam machinery that provided insight into which anomaly characteristics might indicate the ship's remains. Cartographic records researched by NOAA identified environmental characteristics of Cape Romain at the time of *Planter's* loss and salvage. Those data supported identification of a high-priority area that was associated with the c. 1870-1880 shoreline of Cape Romain; that area, which would serve as the focus of the remote-sensing survey, was later extended along the historic shoreline during the field operations.

The remote-sensing survey at Cape Romain took place on 13 August 2010. Magnetometer data identified 17 anomalies in the original area and 9 in the extension. None of the magnetic anomalies in the original survey area exhibits signature characteristics typically associated with shipwreck remains, steam machinery or any equipment that could be associated with *Planter*. A concentration of 3 anomalies in the extension area contained signature characteristics suggestive of shipwreck remains. That concentration of anomalies was investigated by probing on 22 and 23 November 2010. Probing identified metal in two locations at depths of approximately 10 feet below the bottom surface. Based on the research and field work, these anomalies and contacts are presumed to represent the *Planter* wreck site.

Historical and cartographic research associated with the *Planter* project was carried out by Dr. Timothy J. Runyan, Acting Manager of the Maritime Heritage Program; NOAA historian and nautical archaeologist Bruce Terrell; Dr. Steven O. Rohmann, Ph.D. at the Office of National Marine Sanctuaries; and IIMR historian Robin Arnold. Historic map research and map graphics were prepared by John Macek of NOAA's Office of Coast Survey Mapping and Charting Division. Project survey personnel included IIMR Principal Investigator Dr. Gordon P. Watts, Jr.; remote-sensing operator/archaeologist Joshua Daniel; and Dr. Tim Runyan. Probing investigations were conducted by Mr. Daniel and archaeologist Ralph Wilbanks. Dr. Watts and Mr. Daniel analyzed the remote-sensing data. Dr. Watts, Mr. Daniel, Mr. Terrell and Ms. Arnold prepared this report.

NOAA's Office of National Marine Sanctuaries is particularly indebted to Dr. Timothy Runyan for his tireless efforts as an advocate for Robert Smalls and for finding *Planter*. Dr. Runyan led NOAA's Maritime Heritage Program at a critical period between 2007 and 2010, during which time it matured from a fledgling collective of shipwreck-archaeologists to a program focused on outreach and the many facets of maritime heritage. Report design by Matt McIntosh and layout coordination by Liz Liang.

ROBERT SMALLS

Robert Smalls was born into slavery in Beaufort, South Carolina on April 5, 1839. His mother, Lydia Polite, worked in the house of their master, John K. McKee. Smalls' father is not clearly known, but historians believe he was likely a white man, and Smalls' descendants believe he was likely McKee's son Henry, who inherited Lydia and Robert in 1848 (Moore 2001, Moore 2012b). House slaves, called "Swonga people" in the local Gullah dialect, were considered the elite among enslaved blacks because they had a closer association with the white culture they served (Miller 1995:7).

As a youth Smalls was leased out for various tasks on the Charleston waterfront, including stints as waiter, lamplighter, stevedore on the city's docks, shipyard rigger in winter and coastal sailor during the calm warm weather months. Smalls had a degree of freedom not always available to slaves. His master permitted him to keep a portion of his pay, and in 1858 at the age of 19 he was able to marry Hannah Jones, an enslaved hotel maid. Smalls was allowed to begin the long-term purchase of both his wife and their newborn child from her master (Miller 1995:8-9).

In July 1861 Robert Smalls took work as a deck hand on the steamboat *Planter*. Owned by John Ferguson, the vessel was used to transport cotton and passengers between Charleston and Georgetown, South Carolina. During the course of his work, Smalls learned to navigate through the shallow creeks and rivers of coastal South Carolina. Soon after the Civil War began, *Planter* was chartered by the Confederate government as a dispatch and survey boat. By that time Smalls had become *Planter's* wheelman (also called steersman). Although the position was essentially the same as a "pilot," black men

were not allowed that level of command before the War Between the States (House of Representatives Report No. 1887); thus as second in command, the steersman transmitted the captain's orders to the crew. The boat spent many months surveying the rivers and harbors along South Carolina's central coast (Miller 1995:9).

During this time *Planter* was active in Charleston Harbor, presumably with Smalls onboard. Baltimore's daily newspaper reported on 31 December 1860 "the steamer *Planter*, with a detachment of the Citadel Cadets and guns of heavy caliber, proceeded on Monday morning to Morris' Island for the purpose of taking charge of a breastwork that has been erected there" (Baltimore Sun 3 January 1861).¹ *Planter* also engaged in testing the blockade:

The steamer *Planter* ran on to sea a short distance on Sunday afternoon to reconnoiter, and encountered one of the blockading steamers. A number of shots were exchanged. Those of the enemy fell short, but one of the shots from the *Planter* is believed to have taken effect. This, probably, accounts for the heavy firing which was heard yesterday afternoon (Macon Telegraph 1 January 1862).

On May 12, 1862 *Planter* returned to Charleston from a mission of taking on four cannon -- a banded 42-pounder rifled cannon, an 8-inch Columbiad, an 8-inch seacoast howitzer and a 32-pounder cannon -- and a gun carriage from the battery at Cole's Island (ORN Series 1 vol. 12:825-826). The Confederates planned to deliver the weaponry to Fort Ripley at Charleston's Middle Ground the next morning. However, the evening before delivery while *Planter* was docked at the Southern Wharf in Charleston, the white crew members left the vessel to attend a

ball. While they were gone, Smalls and the other eight black crewmen put into action a plan Smalls had conceived (Harper's Weekly June 14, 1862). At 3 a.m. on May 13, Smalls directed the crew to steam to Charleston's North Atlantic wharf, where he took on his wife and children as well as several other crew members' relatives. Then with Confederate flag flying they steamed out into the harbor just as dawn was approaching. With his back to the Confederate forts and wearing the captain's straw hat, Smalls blew the steam whistle at the appropriate check points, thereby fooling the soldiers at the forts into believing *Planter* was simply getting an early start on the delivery of the cannons (Miller 1995:2-3).

An interview with Robert Smalls a few weeks later published in Harper's Weekly told the story:

He entered upon his duties on board the *Planter* some six weeks since, and, as he told me, adopted the idea of running the vessel to sea from a joke which one of his companions perpetrated. He immediately cautioned the crew against alluding to the matter in any way on board the boat, but asked them, if they wanted to talk it up in sober earnestness, to meet at his house, where they would devise and determine upon a plan to place themselves under the protection of the Stars and Stripes instead of the Stars and Bars. Various plans were proposed, but finally the whole arrangement of the escape was left to the discretion and sagacity of Robert, his companions promising to obey him and be ready at a moment's notice to accompany him. For three days he kept the provisions of the party secreted in the hold, awaiting an opportunity to slip away. At length, on Monday evening, the white officers of the vessel went on shore to spend the night,

¹ The cadets fired the first shots of the war at the Star of the West, likely with some of these same guns, just a few days later on 9 January 1861.

intending to start on the following morning for Fort Ripley, and to be absent from the city for some days. The families of the contrabands were notified and came stealthily on board. At about three o'clock the fires were lit under the boilers, and the vessel steamed quietly away down the harbor. The tide was against her, and Fort Sumter was not reached till broad daylight. However, the boat passed directly under its walls, giving the usual signal -- two long pulls and a jerk at the whistle-cord -- as she passed the sentinel. Once out of range of the rebel guns the white flag was raised, and the *Planter* steamed directly for the blockading steamer *Augusta* (Harper's Weekly June 14, 1862).

Planter was out of range by the time the Confederates realized they had been duped. Smalls delivered the vessel and its cargo to the Union warship *USS Onward*. *Onward's* commander wrote,

I immediately beat to quarters and sprung the ship around so as to enable me to bring her broadsides to bear, and had so far succeeded as to bring the port guns to bear, when I discovered that the steamer, now rapidly approaching, had a white flag set at the fore. The steamer ran alongside and I immediately boarded her, hauled down the flag of truce, and hoisted the American ensign, and found that it was the steamer *Planter*, of Charleston, and had successfully run past the forts and escaped. She was wholly manned by Negroes, who represented themselves to be slaves (ORN Series I vol. 12:822).

Not only did Smalls provide a valuable cargo of heavy guns, but he also shared detailed knowledge of Confederate military plans. He related the location of navigational channels and revealed where lethal torpedoes (mines) were planted that could sink U.S. ships. Admiral Samuel F. Du Pont, Commander of the South Atlantic Blockading Squadron of the U.S. Navy, was impressed with Smalls' bravery and considered the newly self-liberated slave a hero, knowing he could easily have been executed had he been captured in the endeavor. Admiral Du Pont wrote to Secretary of the Navy Gideon Welles, "This man, Robert Smalls, is superior to any who has yet come into the lines, intelligent as many of them [contraband slaves] have been. His information has

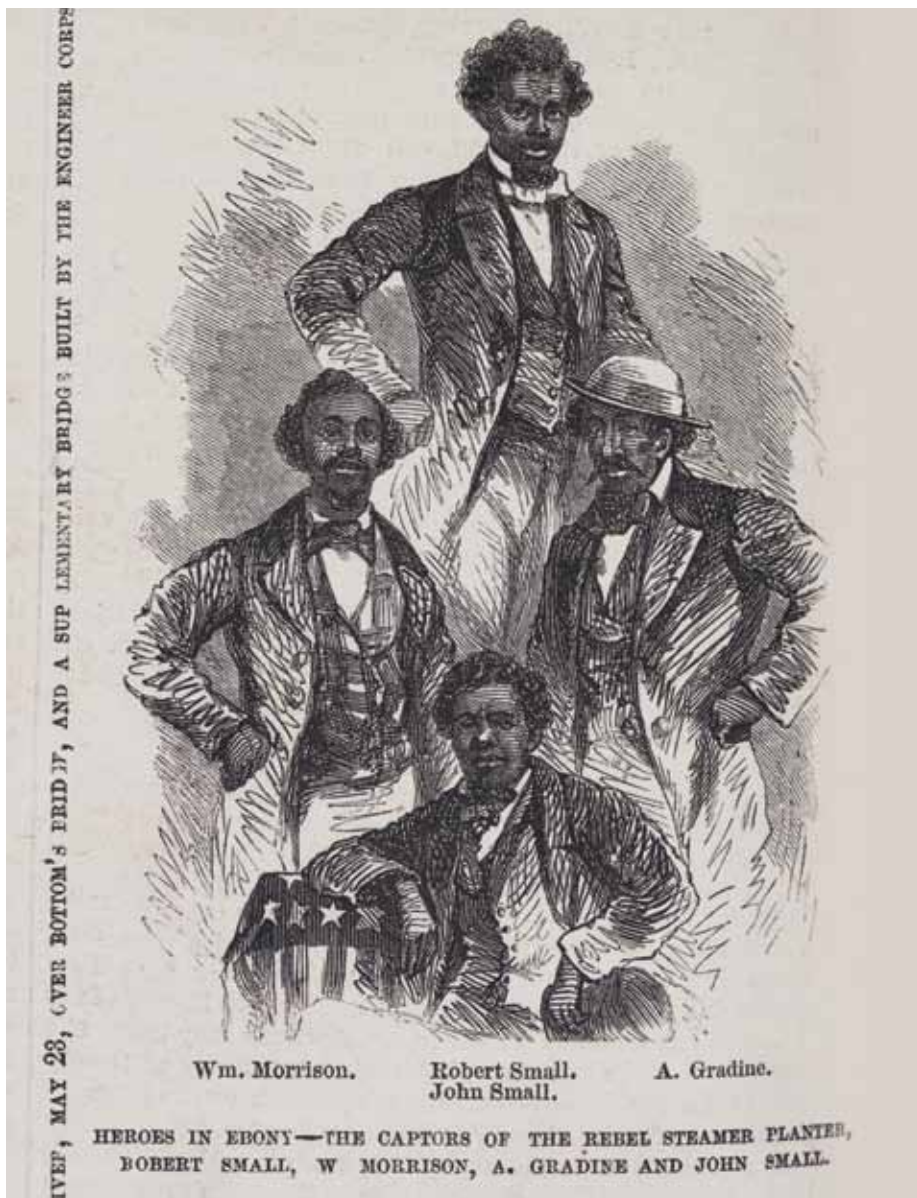


Figure 1. Robert Smalls (top) and three of his colleagues with whom he captured *Planter*.

been most interesting, and portions of it of the utmost importance." He also wrote, "I shall continue to employ Robert as a pilot on board the *Planter* for the inland waters, with which he appears to be very familiar" (ORN Series 1 vol. 12: 820-821).

Planter carried sixteen enslaved African Americans to freedom. Harper's Weekly reported the names of his companions who "performed this gallant and perilous service: Robert Smalls, pilot; John Smalls and Alfred Gradine, engineers; Abraham Jackson, Gabriel Turno, William Morrison, Samuel Chisholm, Abraham Allston and David Jones. They brought with them the wife and three children of the pilot, and the wife, child and sister of the first

engineer, John Smalls. The balance of the party were without families" (Harper's Weekly, June 14 1862).

Planter's log, reportedly acquired by the New York Tribune and containing annotations by Smalls, listed the party as ". . . Robt. Small, Pilot; Alfred Gridiron, Engineer; Abram Jackson, Jebel Turner, W.C. Thompson, Sam Chisholm, Abram Allerton, Hannah Small, Susan Small, Clara Jones, Anna White, Levina Wilson, David McCloud, 3 small children" (Salem Weekly, June 19, 1862).² (Figure 1).

The Northern newspapers were elated by the news of Smalls' bravery, and he was referred to far and wide as the "Hero of the *Planter*" (New York Times 3 October

²Smalls' descendants state that a girl, Clara, was the daughter of his wife Hannah from a previous marriage; this may be the Clara Jones noted in the Salem Weekly. Helen Boulware Moore, Smalls' great-granddaughter, adds that two of the "small children" referenced were Robert and Hannah's children, Robert Smalls Jr. and Elizabeth Smalls (Moore 2012b).

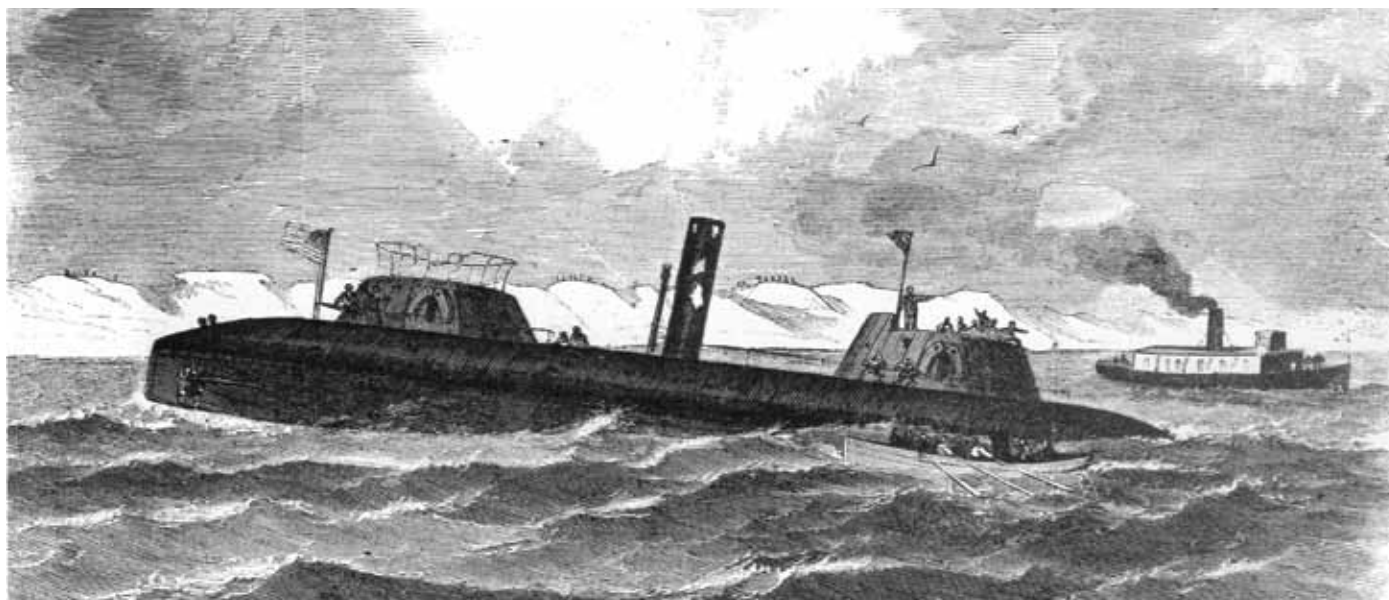


Figure 2. Sinking of the USS *Keokuk*, Robert Smalls navigating.

1862). The New York Herald called the escape “one of the most daring and heroic adventures since the war was commenced...” (18 May 1862). Not surprisingly, the Southern press was not pleased. The Charleston Daily Courier reported,

“We learn that this vessel, which has been allowed to escape under our very noses, to the enemy with a heavy responsibility somewhere, had on board six cannon; one of them a rifled cannon, the rest common guns” (15 May 1862).

The Confederate command in Charleston convened a trial of the officers responsible for the loss of *Planter* in July 1862. On trial were Captain C.J. Relyea, mate S.S. Hancock, and S.Z. Pitcher, engineer. The captain and mate were found guilty of allowing *Planter* to be commandeered. Lt. General John Pemberton, the man in charge of Charleston’s defenses, overruled their sentences and the two were released from custody (New York Times 1862).

That July Congress awarded Smalls and his crew \$4,584, half of the assessed value of the ship, which was to be divided by Admiral Du Pont. Smalls’ share was \$1,500 (ORN Series 1 vol. 13: 823, Welles to Du Pont 15, July 1862). He spent the next twenty years contesting the valuation of the award and ultimately received an upward adjustment during the 1880s (Miller 1995:11-12).

In the months after the *Planter* escape Robert Smalls found himself pulled in several directions by political and mili-

tary leaders. Across the North his notoriety identified him as a potential leader of his people, and he was called to Washington, D.C. to meet Secretary of War Edwin M. Stanton as well as prominent members of Washington’s African American community, who wanted him to encourage the government to permit black soldiers to enlist in the U.S. Army.

Following Smalls’ famous action, he and his new charge *Planter* were assigned to Port Royal, South Carolina, and soon after, on June 25, he piloted the vessel in an action against the Confederate enemy on the North Edisto River at Simmons Bluff (ORN Series 1 vol. 13: 125-126). Although Admiral Du Pont by then was relying on Smalls’ critical knowledge of local waters, he reluctantly allowed his pilot to be sent on public speaking engagements in New York, Washington and some Unionized parts of South Carolina. By November 1862 Smalls was back from his speaking tour and was assigned as pilot to several naval ships operating in South Carolina waters (Miller 1995:15,19).

During his absence *Planter* had been transferred from the Navy to the U.S. Army Quartermaster Corps because the Navy was not equipped to operate wood-fueled steamers like *Planter*. On September 10, Admiral Du Pont reported to Gideon Welles,

The steamer *Planter*, owing to the circumstance of using wood only as fuel for the engine, is almost useless to the Navy from

the great difficulty of procuring it. This difficulty does not exist to any extent with the Army, and I have therefore transferred her to Brigadier-General Brannan to be used in the vicinity of Fort Pulaski. Enclosed is a receipt for her from the chief quartermaster . . . (ORN Series 1 vol. 13: 321).

Planter was used in riverine operations supporting the Army at various places that included Pocotaligo on October 22, 1862 (ORN Series 1 vol. 14). After action at Kirk’s Bluff on the May River on October 19, 1862, it was reported that “the enemy’s fire at times was very heavy, shots striking the steamer in almost every part, and two passing through and through her” (ORA 19 October 1862 Series 1 vol. 14:123).

Smalls had frequently stated his desire to see action in service of his country, and he soon had ample opportunity. He was assigned as pilot at various times to the ships *Bibb*, *Huron*, *Crusader* and *Paul Jones*. On 1 March 1863 he was transferred to Army service; the transfer seemed not to affect his duty stations, as he was next found piloting the ironclad USS *Keokuk* on 7 April 1863 when it accompanied a number of other ships attempting to enter Charleston Harbor. When more than 90 shells hit *Keokuk*, Smalls navigated the ship out of range of rebel guns, where it finally sank. He claimed later that his eyes were injured from the enemy’s cannon fire (Miller 1995:17-19). (Figure 2).



Library of Congress

Figure 3. Charleston Harbor seen from Fort Sumter on 14 April 1865 at ceremonial raising of 1861 flag.

It is unclear when Smalls was reunited with *Planter*, but in December 1863 he was on board as pilot under a Captain Nickerson when they came under fire from Confederate batteries at Secessionville during a mission to move supplies along Folly Island Creek. The shelling was so intense that the captain ordered Smalls to beach *Planter*, then immediately hid below decks in a coal bunker. Smalls, still on deck and realizing the captain had abandoned his station, entered the pilot house and took the vessel out of range of enemy guns. After review, the Commanding General Quincy Gillmore dismissed Nickerson for cowardice and appointed Robert Smalls as the ship's captain, thus Smalls became the first African American to be appointed a ship's master in the U.S. military (House of Representatives Report No. 1887).

In May 1864 Smalls was ordered to take *Planter* to the Philadelphia Navy

Yard for a complete refit. Three years of service on both sides of the Civil War had taken their toll on the steamer. The assessment and repairs were conducted on the New Jersey side of the Delaware River at Newark's National Iron Armor and Shipbuilding Company, located on Kaighn's Point. The work lasted until late December 1864 (Schmidt 28 May 1864).

While awaiting the completion of the ship's refitting, Smalls sought instruction in reading and writing. Politics called again and he was sent as a delegate to represent the city of Beaufort, South Carolina at the National Republican Convention at Baltimore. Around this time a much-reported event occurred in Philadelphia, in which the heroic waterman was evicted from a white-only public streetcar. The local furor caused by the resulting media articles was said to be the direct cause of the Pennsylvania State Legislature to integrate public transportation in 1867

(Reef 2010:211; Miller 1995:22-23).

Smalls and *Planter* were recognized and honored by the populace of Charleston just after the city's fall and return to the Union in February 1865. A correspondent recounted the scene as he accompanied Major General Rufus B. Saxton, military governor of the Department of the South³, into Charleston for the first time on board *Planter*:

It was their first appearance in the harbor since the memorable morning of their departure in 1862. The fog detained us for a few hours on our arrival at the bar. When it cleared away, you can imagine with what cheer our anchor came up, and with what smiles and satisfaction the vessel and her commander swept by the silenced and dismantled Sumter, and hauled in to the waiting, wondering wharves of the ruined city. Wherever we went on shore, we had only to say to the colored people, 'The *Planter* and Capt. Small [sic] are on at the dock' and away they all hurried to greet the well-known, welcome guests. 'Too sweet to think of,' cried one noble-looking old man, who had evidently waited long for the good news of our day, as he hastened to join the crowd (Brown 1867:293).

Smalls continued to command *Planter* past the end of the war, and the presence of both Captain Smalls and his ship were much noted during the grand ceremony of raising Fort Sumter's flag on April 14, 1865. Smalls captained a full ship of black passengers to witness the symbolic event, and one of them wrote, "Almost central in interest, the '*Planter*,' crowded almost to suffocation upon her three decks, with Gen. Saxton's freedmen, revealed her splashing paddles through the broken wheelhouse." Upon the top of the wheelhouse stood Robert Smalls, "...a prince among them, self-possessed, prompt and proud, giving his orders to the helmsman in ringing tones of command" (French 1865 43-44).

From the end of the war until late 1866 Robert Smalls continued in his country's service, as *Planter* was ordered to support the Freedmen's Bureau in transporting formerly enslaved people to camps at Hilton Head Island. On several of the Sea Islands, the U.S. Army Quartermaster Corps under General Saxton had turned confiscated lands into self-sustaining encampments and communities for freedmen who had escaped to the Federal forces. Often

³ He later became a commissioner of the Freedmen's Bureau.

referred to as “the Port Royal Experiment,” the Army organized settlements that were farmed by freedmen who lived off the produce and sold the excess to the government for a profit. One of the most successful, Mitchelville on Hilton Head Island, was named for General Ormsby Mitchel, a Union military man known for protecting slaves who escaped to his lines long before it was mandated by Federal policy (Rose; Ochiai 2001). *Planter’s* passenger manifests from July to November 1865 reflect its transport of both soldiers and freedmen from Charleston to Hilton Head. *Planter* was officially turned over to the Freedmen’s Bureau on September 30, 1865 (Low 7 November 1866).

Following the cessation of hostilities, the Army attempted to sell *Planter* but could not obtain the desired price. John Ferguson, the former owner, tried to convince General Daniel Sickles’ staff to resell the steamer to him; the staff reported that he claimed “she was stolen by negroes and captured from them by our blockading squadron, that he had taken the amnesty oath, and the steamer should be restored to him with other property.” Ferguson’s offer of \$25,000 was refused (Army and Navy Journal 1866:326).

Smalls’ final action as *Planter’s* commander was to transport her to Baltimore to be sold; there an inspection by the commander of the USS *Tacony* was completed in July 1866. The steamer, valued at \$15,000, was sold to Mordecai and Company for \$7,700 on September 18, 1866. In January 1867 the company sold it back to Ferguson -- for far less than his original offer to the Army. Ferguson soon had *Planter* registered and back in operation on its old pre-war route between Charleston, Georgetown and the communities on the Pee Dee River.

During the early antebellum years Smalls continued to make use of the fame created by his *Planter* career. He also seems to have invested money, the funds most likely stemming from his initial reward for commandeering *Planter* and his captain’s pay from the Army. He had started purchasing property early: In 1862 he bought a store in Beaufort and invested money in other properties as well (Miller 1995:17); in 1863 at a slave tax sale he purchased the Beaufort house where he was born, at 511 Prince Street (Greenlee 1973).



Library of Congress

Figure 4. Robert Smalls between 1870 and 1880s

After the war was over, Robert Smalls became involved in local politics through his concerns over education for the local black community. During this time he joined with thirty-seven other black men and several whites to create the Beaufort Republican Club, a launching pad for nominating blacks to office. Smalls himself was nominated as a delegate to the March 21, 1866 Charleston Union Republican Convention and he went on to participate in the creation of the Republican Party platform. He was included in the list of nominated delegates and was elected as a state representative, serving from 1868 to 1872. Smalls then was elected as a state senator and served until 1874.

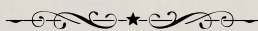
Elected to the U.S. House of Representatives, Smalls represented South Carolina

for a dozen years in Washington, D.C., from 1875 to 1887 (Figure 4). Although he was considered an honest man by his supporters and friends, several times during his political career he was accused of corruption and misappropriation of funds, accusations likely cast by the many political adversaries who abounded during the fractious period of reconstruction in the South and fought ruthlessly to oust black politicians. He was absolved of these accusations before he left office in 1887. Robert Smalls returned to his house in Beaufort and served his appointment as Collector of Customs from 1889 to 1911 (Billingsley; Miller 1995). It was reported that when he heard of *Planter’s* loss in 1876 he felt as though one of his own children had died (Charleston News and Courier 21 September 1876).

Civil War

Actions in which Planter participated

(All locations are in South Carolina) (Billingsley):



Engagement at Secessionville. May 31, 1862

Occupation of Edisto Island. June 3, 1862

Action on Simmon's Bluff. June 23, 1862

Affair on Skull Creek., September 24, 1862

Affair at Kirk's Bluff. October 18, 1862

Skirmish at Coosawatchie. October 21, 1862

Skirmish at Coosawatchie and Engagements at Caston and Frampton Plantations near Pocotaligo., October 21, 1862

Expedition up St. Mary's River. January 23-February 1, 1863

*The Campaign of the Carolinas, December 31, 1864-
March 24, 1865 and April 10-May 28, 1865*

*Destruction of Locomotives and Rolling Stock
between Sumterville and Camden April 1, 1865*

Expedition to Camden., April 5-25, 1865

THE STEAMER *PLANTER*

The sidewheel steamer *Planter* was built in Charleston for John Ferguson between 1859 and 1860. She was constructed at the Francis M. Jones shipyard at the west end of South Battery Street, then known as East Bay Street. The hull measured 147 feet long by 30 feet wide, had a depth of hold of 7 feet 10 inches and drew only 3 feet 9 inches of water; the stern was rounded. Built of live oak and red cedar, the vessel's registered tonnage was 313 tons (Charleston Tri-Weekly Courier 1860; Simmons 174-175; Flinn Master's Oath).

Following the construction of the hull and cabins, *Planter* was towed around to the western side of Charleston where the machinery was installed at the Cameron and Company's iron foundry on Hasell Street⁴, including two horizontal high-pressure engines utilizing wood-burning fireboxes for the boilers; those twin non-condensing engines drove two side-paddle wheels (Charleston Tri-Weekly Courier 1860). The two boilers were placed on the main deck rather than in the bottom of the hull. *Planter's* cylinder was 18 inches in diameter with a 72-inch stroke (ORA Series II vol 1:180).

During *Planter's* construction, a correspondent visited Cameron's machine shop, writing:

We examined, with much pleasure, the bed-plate of a Doctor Engine, designed by Mr. J.F. Taylor, one of the partners of the concern. To those who are not cognizant of what is a 'Doctor Engine, we may say it is a Beam Engine, with four pumps. Two pumps are placed on each end of the bed-plate. On each side of the bed-plate there are four columns, with a heater upon the top. The water is drawn through each side of the bed-plate up through the columns into the heater, from whence it returns again to the force pump through the columns, and is discharged from

the side of the bed-plate through short pieces of pipe into the boiler. Two of these were in course of construction -- one for Captain Ferguson's steamer *Planter*, and the other for the new boat of Messrs R.C. & I. Davis (Charleston Tri-Weekly Courier 23 August, 1860).

Planter was reputed to be one of the fastest boats in Charleston Harbor. Owned and captained by Ferguson, the sidewheeler transported cotton and passengers between landings on the Pee Dee River, Georgetown and Charleston; she could carry up to 1,800 bales of cotton on the decks (Charleston Tri-Weekly Courier 14 August 1860).

During its lease to the Confederacy, *Planter* was armed with a 32-pounder bow cannon and a 24-pounder howitzer on the stern. After Smalls commandeered her, U.S. Navy records noted that the vessel still possessed the same armament and suggested that at least for a while it retained the Confederate guns (ORN Series II vol 1:180). The steamer was also protected by the addition of "musket proof bulwarks around her aft and about her machinery" (ORN Series 1 vol. 13:126). Shortly after this observation, *Planter* was noted as having a "little Parrott gun on her bow" during action at Potomac in October, so the vessel may have been rearmed under Army supervision. Battle reports also show *Planter* making use of a 30-pounder Parrott rifle during the battle (Nichols 1886; ORA Series 1 vol 14:147).

Several changes were made to *Planter* upon her transfer to the Army. A U.S. Army Quartermaster captain at Hilton Head wrote, "Her machinery is not in very good order, and will require some repairs, etc.; but this I can have done here. She will be of much service to us, as we have comparatively no vessels of light draft" (Elwell 10 September 1862).

The wear of battle showed on *Planter* by 1863 when she passed Fortress Monroe, Virginia on a voyage to New York:

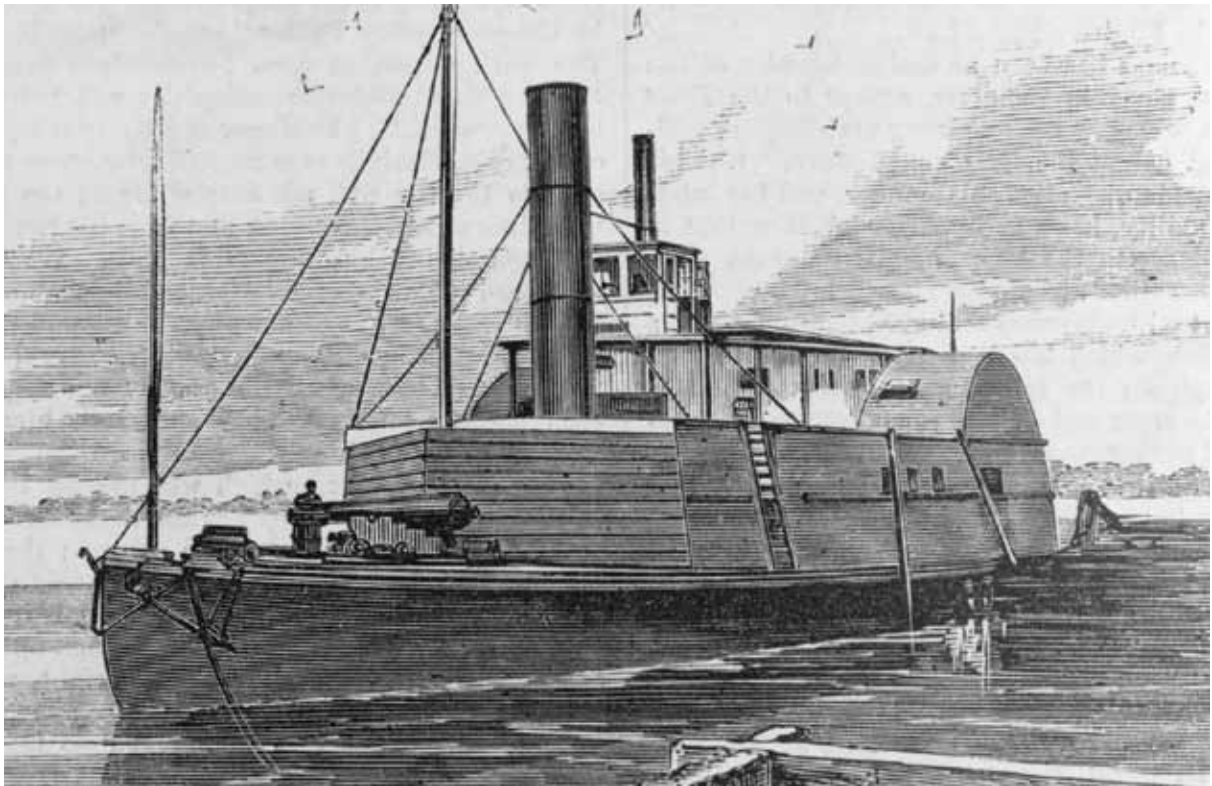
The prize steamer *Planter*, 3 ½ days from Port Royal, put into Hampton Roads, last Friday, as reported. She is short of fuel, and is bound to New-York. The boat is unfit for sea, and her boilers are sadly out of repair. She has a cargo of 675 bales of cotton and 125 barrels turpentine . . . She has got aground near Craney Island . . . " (New York Times 29 July 1863).⁵

Finally, in spring 1864 Robert Smalls was ordered to take *Planter* to the Philadelphia Naval Yard to have the vessel assessed and repaired. A report on the boat's condition said:

We have examined the Boilers Engines etc. of the "Steamer *Planter*" and would recommend that the following alterations and repairs be made viz-The Boilers should be condemned and new ones put in. The new Boilers should be placed in the hold of the vessel in order to get a gangway from bow to stern, for moving freight or Guns. The Cylinder of the Starboard Engine, should be rebored [sic]. The Crosshead brasses for both Engines should be renewed. The Starboard Engine will require a new piston head and rings, both Engines Should be lined up. The Donkey Engine requires a new Set of valves, and Sundry other slight repairs. The[re] should be an auxiliary Steam pump put in for Boiler feed, bilge fire pump, as the vessel is entirely deficient in one pump at present. A new Exhaust Pipe will be required and Sundry repairs to Smoke Pipe. The Copper and other Pipes from Boilers to Engines, Donkey etc. will require altering to suit the new Boilers. The vessel Should be hauled out and such repairs made, as may be found necessary (Whiting 19 May 1864).

⁴ These machine shops were burned during the December 11 and 12, 1861 fire that destroyed much of Charleston (Harper's Weekly 28 December 1861).

⁵ The Official Records do not reflect anything regarding this voyage.



Harper's Magazine 14 June 1862

Figure 5. Note artist's placement of *Planter's* stack just one month after event. (Harper's Magazine 14 June 1862)

Whiting's examination of the hull followed two days later:

We have examined the Hull of the "Steamer *Planter*" and find that the following alterations and repairs will be necessary viz-The vessel Should be hauled out _ her bottom stripped of the Sheathing Metal and recaulked and coppered, the Seams in Main deck are open and Should be caulked. If the Boilers are placed in the hold a hatch will have to be formed in Main deck and Some alterations made in the Staunchions [sic] above and below deck _ New Planking will be required on her guards (Whiting 26 May 1864).

By May 28 *Planter* had been moved to the New Jersey side of the river to the National Iron Armor and Ship Building Co. at Kaighn's Point in Newark. The company president, William Milligan, wrote Captain Charles Schmidt of the Army Quartermaster Corps that, in addition to the above-noted repairs, *Planter* would need "Repairs to the Joiner Work Painting &c, the Vessel being in very bad order but the hull appears sound and with the above repairs, She would be for a long time Serviceable." He estimated the costs from \$25,000 to \$29,000 (Milligan 28 May 1864). Work progressed through

the summer and fall until December 1864, when Smalls at last rejoined the vessel and took her back to Port Royal, arriving on December 24 (Miller 1995:23).

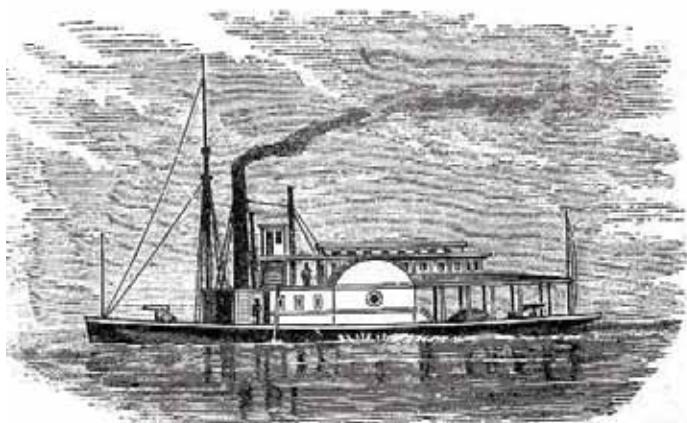
Army Quartermaster billing correspondence following the completion of work gives detail on *Planter's* repairs. Joinery repair was done by the Maples & Wheaton Company. The berths, cabin interiors and doors of the promenade deck were all rotted and were replaced, as were the stanchions that supported the deck over the cargo area. The hurricane deck windows were fixed to halt leakage. New interior joinery was required in the kitchen, coal bunkers and bulkheads. The ceiling was torn out to replace a beam between the paddlewheels. The fore and aft shear moldings were all replaced, as were most of the carlings, which had to be scarphed to create new ends, the old ones having all rotted (Wheeler 18 January 1865).

The promenade and hurricane decks reportedly "leaked like a sieve" and appeared not to have been re-canvassed since the original construction. The decks were almost all re-canvassed, and the entire boat was then repainted. D.W. Cleary & Sons Plumbers repaired the water closet on the promenade deck as well as the

twelve cabin water closets on the main deck. They also repaired scuppers in the wheel house and the main deck. In addition, all cabin furniture was re-upholstered and painted. Blacksmiths built new water wheels, repaired guard beams, and built new straps for the hog frame (Wheeler 18 January 1865).

The smokestack could not be repaired so a new stack was required, as were a new auxiliary donkey engine and a capstan (Wheeler 24 January). New boilers, most of the paddlewheels and a smokestack had to be constructed. Only a portion of the starboard engine was reflected in the billing correspondence (Milligan 26 January 1865). A letter from the time of sale in 1866 also suggests that the firebox had been converted to coal-burning, stating that "all her expenses, except coal, were to be borne by the [Freedmen's] Bureau" (Low 7th November 1866). The final cost for repaired and reconstructed features for *Planter* totaled \$40,850.64 (Milligan 26 January 1865).

A question on *Planter's* appearance emerges when examining contemporary illustrations. The earliest known image of *Planter* appeared in Harper's Magazine on 14 June 1862 (Figure 5); this



Nichols

Figure 6. *Planter* illustration from Perry's Saints.



Courtesy of New York Public Library

Figure 7. Stereo photograph of *Planter* probably taken at Accommodation Wharf in Charleston.



Naval History and Heritage Command

Figure 8. Photograph of *Planter* at Georgetown, South Carolina.

engraving, published just one month after her capture, shows a steamer with reinforced bulwarks and the smokestack placed forward of the pilot house of the boat. The editor wrote, "We publish here-with an engraving of the steamer *Planter*, lately run out of Charleston by her negro crew . . . from photographs sent us by our correspondent at Hilton Head." The referenced photograph is presently not au-

thoritatively known, but if found might clarify whether the stack was, indeed, placed forward or aft of the pilot house. The forward stack arrangement appears in several subsequent 19th century publications relating to *Planter* including Perry's Saints (Nichols 1886; Figure 6) and the Official Records of the Union and Confederate Navies (ORN 1882 Series 1 vol 12:820b).

A stack built forward of the pilot house would likely block the pilot's vision, thus it was not a typical arrangement on steamers of this type and era. The only known period photographs of *Planter* are both undated, one stereo photograph taken at Charleston (Figure 7) and another taken at Georgetown.⁶ (Figure 8).

Both photographs show the stack placed aft of the pilothouse. It is worth noting that the Charleston image shows *Planter* with a square pilot house while the Georgetown image shows a rounded house possibly reflecting renovations made at the Philadelphia Navy Yard in 1864. It is possible that one of these images is the photograph referred in by Harper's Magazine (above). The correspondence of the Army Quartermaster in 1864 makes no mention of the stack being moved aft from a forward position. It is possible that the original engraving was misrepresented by an artist who had no familiarity with *Planter* and that image was then copied through the years.

As noted above, *Planter* remained active in military actions during the first months of 1865 and with the Freedmen's Bureau through the middle of 1866. In July 1866 the Army determined to sell the vessel and placed this advertisement in the local papers:

Will be sold at Public Auction at North Commercial Wharf, at 10 o'clock A.M. August 15th, 1866, the U.S. steamer "*Planter*," with all her equipments. The "*Planter*" is well adapted for carrying cotton, having capacity for one thousand bales. Her hull and machinery are in perfect order. She is 150 feet long; 46 feet beam; 7 feet depth of hold; draught 6 feet; has two tubular boilers; two horizontal high-pressure engines, not connected; diameter of cylinder 20 inches; stroke of piston 6 feet. Terms cash, in Government funds, C.W. Thomas, Brevet Lieut. Col. And Chief Quartermaster (Thomas 31 July 1866).

Following John Ferguson's fortunate purchase of *Planter* from Mordecai & Co., the steamer resumed her pre-war role in the cotton trade, steaming between Charleston, Georgetown and the Pee Dee River stops, including Gardeners Bluff. *Planter* was re-documented at Charleston on 17 November 1866 and was giv-

⁶ Miller (1995: following 92) cites this photograph from the Navy Historical Center (now Naval History Command) as a prewar image, but the Navy's records do not reflect this.

en the official number 19658 (Mitchell 1979:175). Ferguson died several years later in 1869, and ownership passed to Ravenel and Holmes & Co., owners of the Accommodation (sic) Line at Accommodation Wharf opposite 177 East Bay (Charleston Daily News 27 May 1872; Sholes 1882:19).

In addition to a regular schedule, *Planter* was also chartered by numerous groups, and such occasions were often noted in contemporary newspapers. She seemed to be a particular favorite of African Americans, likely due to her association with Robert Smalls: “The Steamer *Planter*, which started from this city yesterday for Savannah, has been engaged, we understand, to bring on a colored fire company of that place on a visit” (Charleston Courier 4 June 1869:4). Also, “The negro excursionists from Tallahassee, arrive in our city on the 4th. They were taken in charge by the Baptist congregation here and escorted to the First African Baptist Church, Where a sumptuous dinner was spread for them” (Savannah Morning News 6 July 1871).

Planter's Loss

On Wednesday 22 March 1876, *Planter* was under the command of Captain John Flinn as she made one of her regular cruises north to Georgetown. While there, the captain was made aware that the schooner *Carrie Melvin* had run aground at Cape Romain the previous Monday in the sandy shoals just off Cape Island. Not being obligated again until Saturday the 25th, Flinn determined to go to the *Melvin* in hopes of possibly towing her to deeper water (Charleston News and Courier 29 March 1876:4).

The weather on Thursday the 23rd was mild but rainy and the barometer was reported to be falling. Owing to her shallow draft, *Planter* was able to reach the *Melvin* and take her hawser. *Planter* succeeded in changing the *Melvin*'s position, also moving her “twice her length towards the channel” before the line parted. By then it was too late in the day to make a further attempt on the existing tide. Flinn took *Planter* around behind Cape Island and anchored for the evening in the channel between Cape Island and Lighthouse Island near the two Cape Romain Lighthouses (Charleston News and Courier 29 March 1876:4).

The next morning, March 24th, *Planter* ventured back out into a heavy sea; while attempting to get close to *Melvin* the sidewheeler struck the shoal and sprang a leak. Flinn, finding that the pumps on *Planter* could not keep up with the rate of the incoming water, elected to ground the shallow-hulled *Planter* on the beach, hoping to repair the leak and get off on the next flood tide. Unfortunately, a gale rose before the flood tide, and by then the surf had damaged *Planter* beyond repair. The passengers were safely carried to the beach in the lifeboat and the crew immediately set to salvaging all moveable goods (Charleston News and Courier 29 March 1876:4).

The storm that had broken *Planter* raged for several days. All of eastern South Carolina was affected, as tornados blew through and a temperature drop caused a frost that killed most of the fruit and garden crops in Georgetown. After the storm abated, five passengers who had weathered the storm in the care of the Cape Romain light keepers were brought out to the pilot schooner *Atalanta*, which carried them to Georgetown. The eighteen crew members, including Captain Flinn, arrived in Charleston on board the steamer *Clarendon* by March 31 and reported that *Planter* was “too much injured to be repaired.” The bow was facing to sea and had been opened up, it was reported, while the guards were broken and she was “fast becoming a wreck” (Charleston News and Courier 29 March 1876:4; Charleston News and Courier 1 April 1876:4).

Clarendon carried salvaged rigging from *Carrie Melvin*, also reported to be ashore. *Melvin* was so high on the shoal that she was thought lost for good, so after being stripped of all saleable materiel the vessel was sold. Ironically, the new owners towed her off the shoal by May 30 and in June *Melvin* was at the Pregnell shipyard in Charleston being repaired (Charleston News and Courier 30 May 1876:4; Charleston News and Courier 16 June 1876:4).

Planter was not so fortunate -- the damage was complete, and an immediate replacement for her route needed to be found. By May 19 the News and Courier announced the construction of “the hull of a new steamer, to take the place

of the ‘*Planter*’ on the Georgetown route, [it] has been estimated for by several of our mechanics and will, it is expected, shortly be put under way” (Charleston News and Courier 19 May 1876:4). This vessel, too, was named *Planter*; it had the same owners of Ravenel and Holmes, & Co. and was captained by John Flinn, who had been absolved of any responsibility in the loss of the original *Planter* (Charleston News and Courier 5 June 1876:4; Charleston News and Courier 12 June 1876:4).

By mid-July the salvage of *Planter* was complete. Between July 14 and July 18, the Courier carried adverts for the auction of the steamer at Accommodation Wharf to be held on July 16 (14 July 1876:4).

Sundry articles saved from Steamer *Planter* consisting in part of: CYLINDERS, Pistons, Valve Gear, Connecting Rods, Rollers, Donkey Pumps, Hoisting Engine, Copper and Iron Pipes, lot Wrought Iron, Water Wheel, Shafts, Centers, Cranks, Cabin Doors, Shutters and Panel work, Binnacle, Spirit Compass, Mattress, Blankets, Blocks, & c, &c. Also, One Metallic LIFE BOAT, Yawl, Chains, &c. Also, Two MARINE ENGINES, 16 inch Cylinder, 6 feet stroke. One Steam Pump, two Wooden Bilge Pumps (Charleston News and Courier 17-18 July 1876:4).

On 19 July the Courier noted,

THE SALE OF THE PLANTERS' REMAINS - A quantity of furniture, machinery, iron and copper, recovered from the wreck of the steamer *Planter*, were sold by Mr. W.Y. Leitch, yesterday, in general lots. The whole amount brought \$1,000 cash.

Locating Planter

In order to locate the present position of extant remains of *Planter*, NOAA's Maritime Heritage Program reviewed historic charts relative to the 1876 sinking episode and assessed the accounts from the Charleston News and Courier mentioning geographic features. Cape Island lies in a dynamic environment and has encountered many geomorphological changes from shifting sands over the 135 years since *Planter*'s loss. Tracking

the cape's movement is difficult because original charts were often produced several years after the surveys, and during the interval the topography could change rapidly. Geo-rectification of the following historic charts was accomplished by using the positions of the unique dual lighthouses and creek at Lighthouse Island which seems to have consistently maintained its channel over the last 138 years.

The hydrographic survey used for an 1878-published chart shows the likely topography of Cape Romain at the time of *Planter's* demise (Figure 9). This chart appears to be relatively the same as a 1883 Coast Survey chart used for the following overlays. The reader will notice the breakers marked to the southeast as well as the channel between Lighthouse Island (then part of Raccoon Key to the east) and Cape Island.

Figure 10 (below), shows an 1883 U.S. Coast Survey sounding map (in blue) that is geo-rectified and laid over a NOAA Coast Survey Chart (#11351 ed. 23, 2012) in black. The modern chart was likely surveyed around 2011 (pers. com. John Macek, 2012) and represents the southern tip of Cape Island. The black outline shows the recent channel between Cape Island and Lighthouse Island, to the west, to be narrower and skewed to the west as opposed to the 1883 channel. The blue sounding marks indicate the 1883 channel between Cape and Lighthouse islands (Figure 10).

At the time of this document's writing, the 1878 chart was not available for geo-rectification, so an overlay was made with the 1859 survey (in white) to show the cape's migration (Figure 11). Note the presence of breakers and shallow soundings up to ½ mile south of the cape in the 1859 chart. The channel between the Cape and Lighthouse islands is prominent in both charts. The white "blobs" are sandy shoals that appear to break the surface of the water.

A 2011 U.S. Department of Agriculture Farm Service satellite image shows a relatively recent representation of Cape Romain (Figure 12). The Cape Island channel has reopened since a 2006 image



Figure 9. 1878 Hydrographic survey chart of Cape Romain.

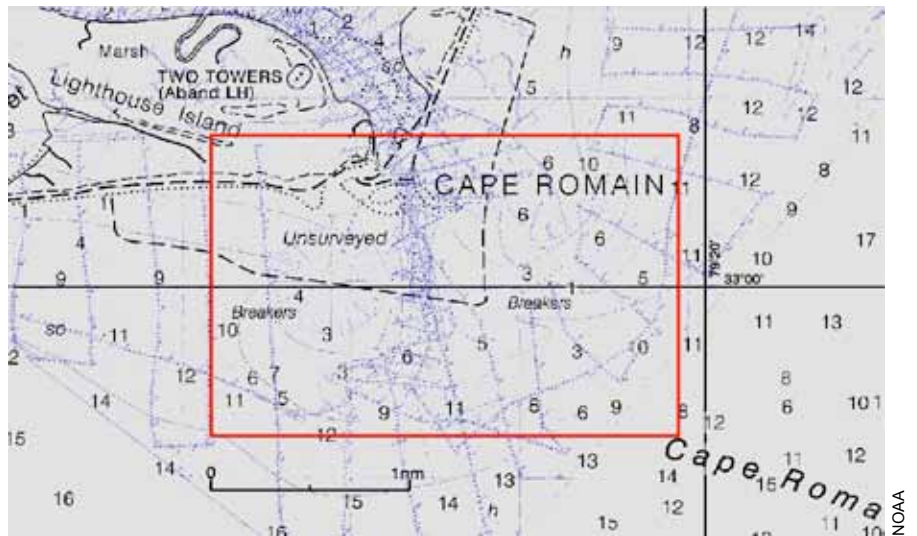


Figure 10. NOAA Coast Survey Chart, 2012.



Figure 11. 1859 Coast Survey Chart (white) overlaid on 1883 chart (blue).

(not shown) revealed a temporary closure and joining with Lighthouse Island's southern shore.

The final cumulative overlay of all of the preceding charts, illustrated in Figure 13, shows the total cape migration since the printing of the 1883 chart (green), which appears to be consistent with the 1878 map. The overlay presents the charts from 1859 (white), 1883 (blue) and 2012 (black) with the 2011 satellite image. The present topography is evident in the satellite layer. The significant references on these maps are the location of the south end of the Cape, the channel between the islands, and the presence of breakers.

As noted, these images were all georectified using the twin lighthouses on Lighthouse Island. They illustrate the rapid shift in sedimentation through time which has been attributed to the confluence of man-made and natural events. The 1939 damming of the Santee River deprived the barrier islands of a sand source, and in 1989 Hurricane Hugo caused a great deal of erosion. Hurricane Bertha in 1996 also reopened the channel

between the islands and welded the western spur of Cape Island onto Lighthouse Island (Raynor 2009:25-27).

Discussion

The 3 April 1876 Charleston Courier reported *Carrie Melvin* as "being on the breakers" as well as "stuck heavily on the beach." The May 30 paper said that "she was forced ashore on the sand banks of that reef" and was "high up on the shoal." This suggests the schooner was either on the cape's beach or on the shoals and breakers just to the south of the cape. The 1859 map also shows exposed sand shoals offshore.

When *Planter* attempted to tow *Melvin* off the first day, the 29 March Courier noted that *Planter* moved the schooner "towards the channel," suggesting the certain existence of a channel between the two islands (1876:4). *Planter* then "struck on the shoal" and sprang a leak, and the captain decided to "run her on the beach." This description, too, matches with the charts and suggests the vessel was beached on Cape Island's southern tip. Finally, the pilot boat *Atalanta* heard

at Bull's Bay that *Planter* and *Melvin* were both stranded "on the breakers at* Cape Romain" and proceeded to find the passengers heading out on the light keeper's boat, from which they transferred to *Atalanta* (Charleston News and Courier 29 March 1876:4).

On both the 1859 and 1883 charts, the southern tip of Cape Island appears to be less than ½ mile wide from west to east. A ½-square-mile box may be drawn that incorporates the cape as well as a portion of the breakers and shoals; this zone is the best guess for the scene of *Planter's* beaching.

Remote sensing by magnetometer depends on metal to provide a "hit" or reading. Because most of *Planter's* engine equipment was salvaged, it is unknown what distribution or strength of magnetic signature might be expected in a magnetometer survey. However, at the time of salvage there was no mention of the salvage or sale of the iron boilers. Assuming the boilers were left in place and were not destroyed by subsequent storms, they would likely provide material for a substantial magnetic signature.



Figure 12. Cape Romain, 2011 satellite image.



Figure 13. Overlay of 1859 (white), 1883 (blue) and 2012 (black) charts with 2011 satellite image.

THE SEARCH FOR *PLANTER'S* REMAINS



Figure 14. High-probability or “best guess” location for *Planter* based on historical and cartographic research.



Figure 15. Original and extended survey area with as-run track lines, 2006 NOAA Chart.



Figure 16. Launching the EG&G GEOMETRICS G-881 cesium vapor magnetometer.

Based on the historical and cartographic research, an area of highest probability was identified off Cape Romain (Figure 14). Once on site with the survey vessel that area was extended to the east and north to cover more of the historic surf zone. Survey lines laid out in the initial area were extended into the new area. With the exception of shoals where water was constantly breaking, both areas were surveyed (Figure 15).

Remote-Sensing Survey Methodology

To reliably identify the potential remains of *Planter*, project personnel conducted a systematic remote-sensing survey aboard the Tidewater Atlantic Research (TAR) 25-foot Parker power boat. The survey vessel was equipped with a navigation computer operating HYPACK survey software, HYPACK being a navigation and data collection program. During the survey, the project staff employed both magnetic and acoustic remote sensing. This combination of remote-sensing tools represents the state of the art in location technology to find submerged cultural resources and offers the most

reliable and cost-effective method to locate and identify significant targets. Data collection was controlled using a differential global positioning system (DGPS). DGPS produces highly accurate coordinates necessary to support a sophisticated navigation program and assure reliable target location.

Magnetic Remote Sensing

A GEOMETRICS G-881 marine cesium magnetometer capable of plus or minus 0.001 gamma resolution was employed to collect magnetic data during the survey. To produce a comprehensive magnetic record, data was collected at 2Hz. Due to shoals within the project area the magnetometer sensor was towed just below the water surface at a speed of approximately three to four knots. Magnetic data were recorded as a data file associated with the computer navigation system. Data from the survey were contour-plotted using QUICKSURF computer software to facilitate each anomaly’s location and to define target signature characteristics. All magnetic data were correlated with the acoustic remote-sensing records.

Acoustic Remote Sensing

A 445/900 kHz KLEIN 3900 digital side-scan sonar (interfaced with SONARPRO data acquisition software) was employed to collect acoustic data in the survey area (Figure 16). Due to shoals occurring within the project area, the side-scan sonar transducer was deployed and maintained 3 to 5 feet below the water surface. Acoustic data were collected using a range scale of 50 meters to provide sufficient coverage and high-target signature definition. Acoustic data were recorded as a digital file with SONARPRO and tied to the magnetic and positioning data by the computer navigation system. These data were then imported into CHESAPEAKE TECHNOLOGY SONARWIZ.MAP for additional review and to create a mosaic.

Positioning System

A TRIMBLE AgGPS was used to control navigation and data collection in the survey area. That system has an accuracy of plus or minus 3 feet and can be used to generate highly accurate coordinates for the computer navigation system. The DGPS was employed in conjunction

Tidewater Atlantic Research

Tidewater Atlantic Research

with an onboard Compaq laptop loaded with HYPACK (the navigation and data collection program). All magnetic and acoustic records were tied to positioning events generated by HYPACK. Positioning data generated by the navigation system were tied to magnetometer records by regular annotations to facilitate target location and anomaly analysis. All data were plotted to South Carolina State Plane Coordinate System, NAD 83, U.S. Survey Foot.

Data Analysis

To ensure reliable target identification and assessment, analysis of the magnetic and acoustic data was carried out as it was generated. Using QUICKSURF contouring software, magnetic data generated during the survey were contour-plotted at

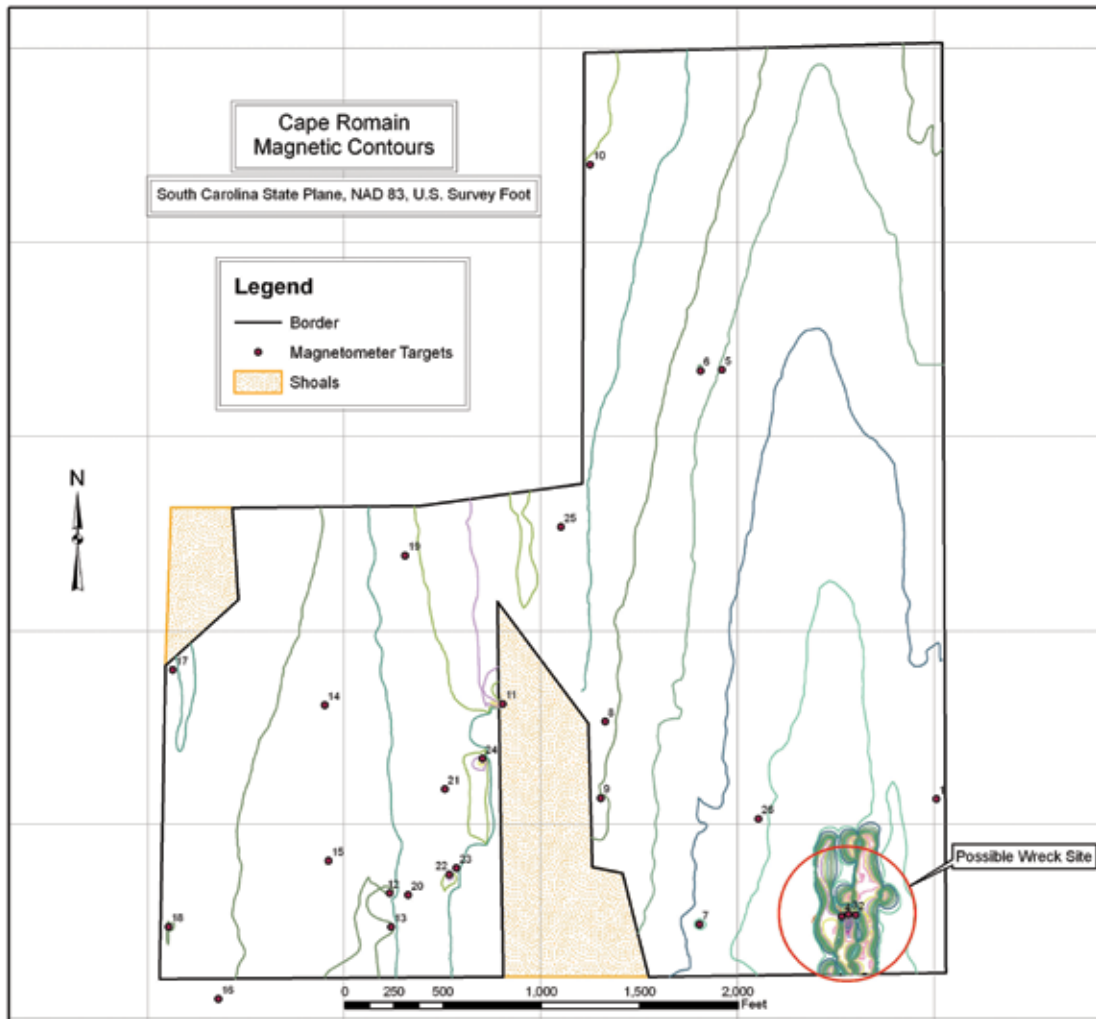
5-gamma intervals for analysis and accurate location of magnetic anomalies. The magnetic data were examined for anomalies that were isolated and analyzed in accordance with intensity, duration, areal extent and signature characteristics. Sonar records were analyzed to identify targets on the basis of configuration, areal extent, target intensity and contrast with background, elevation and shadow image, and were also reviewed for possible association with identified magnetic anomalies.

Data generated by the remote-sensing equipment were developed to support an assessment of each magnetic and acoustic signature. Analysis of each target signature included consideration of magnetic and sonar signature characteristics previously demonstrated to be reliable indica-

tors of historically significant submerged cultural resources. Assessment of each target included recommendations for additional investigation to determine the exact nature of the cultural material generating the signature and its potential National Register of Historic Places (NRHP) significance. A magnetic contour map of the survey area was produced to aid in the analysis of each target.

Description of Findings

Analysis of the remote-sensing data generated during the survey identified a total of 26 magnetic anomalies (Figure 17 & Appendix A). Twenty-three individual anomalies lack the signature characteristics and spatial associations suggestive of more complex shipwreck material. These signatures are likely generated by debris



Tidewater Atlantic Research

Figure 17. Magnetic Contour Map of survey area (Coordinates redacted).

such as fish and crab traps, pipes, small-diameter rods, cable, wire rope, chain, and small boat anchors.

One cluster composed of 3 individual magnetic anomalies (anomalies 2, 3, and 4), has signature characteristics consistent with shipwreck material or other potentially significant submerged cultural resources. That cluster is located in the vicinity of the Cape Romain shoreline where it lay at the time *Planter* was beached and most of the machinery salvaged. The cluster represents the only site that appears to have a potential association with *Planter* in the area surveyed. For that reason the anomaly concentration was recommended for additional investigation.

Analysis of the sonar data confirmed that nothing associated with the anom-

aly cluster was exposed on the bottom surface (Figure 18); for that reason, additional investigation to identify material generating the magnetic signatures would have to be designed around probing and excavation.

Anomaly Assessment Probing

Testing the high-potential anomaly cluster in the *Planter* survey area extension was initially carried out aboard a 24-foot Privateer vessel fitted out for hydraulic probing and excavation. Once the anomaly cluster location was identified, a hand-held proton-precession magnetometer was employed to refine the location of ferrous material generating the signatures. With those locations buoyed, an 11-foot hydraulic probe powered by a 5-horsepower centrifugal pump was

used to assess the nature of material generating the signatures and determine the depth of overburden. Due to engine problems with the 24-foot Privateer, another vessel provided by archaeologist Ralph Wilbanks was used to support on-site investigation on the second day of anomaly investigation.

The on-site investigation was scheduled around low tide in the survey area. Low tide provided a window of approximately two hours when in-water magnetometry and probing could be carried out effectively; before and after that window, both operations would be complicated by current running over the shoal.

Probing on the anomaly cluster focused on the area of highest magnetic intensity. Probing to 11 feet below the bottom surface failed in most locations



Figure 18. Sonar Coverage Mosaic of survey area (Coordinates redacted).

to make contact with material generating the signatures; however, positive contact was made at two sites (Figure 19). Both of those contacts were found to be metal

9 feet below the bottom surface. More intensive probing in those contacts confirmed that material within 9 feet of the bottom surface was small or fragmentary

and did not, at that level, appear to represent large structures such as boilers. No evidence of wood hull structure was identified.

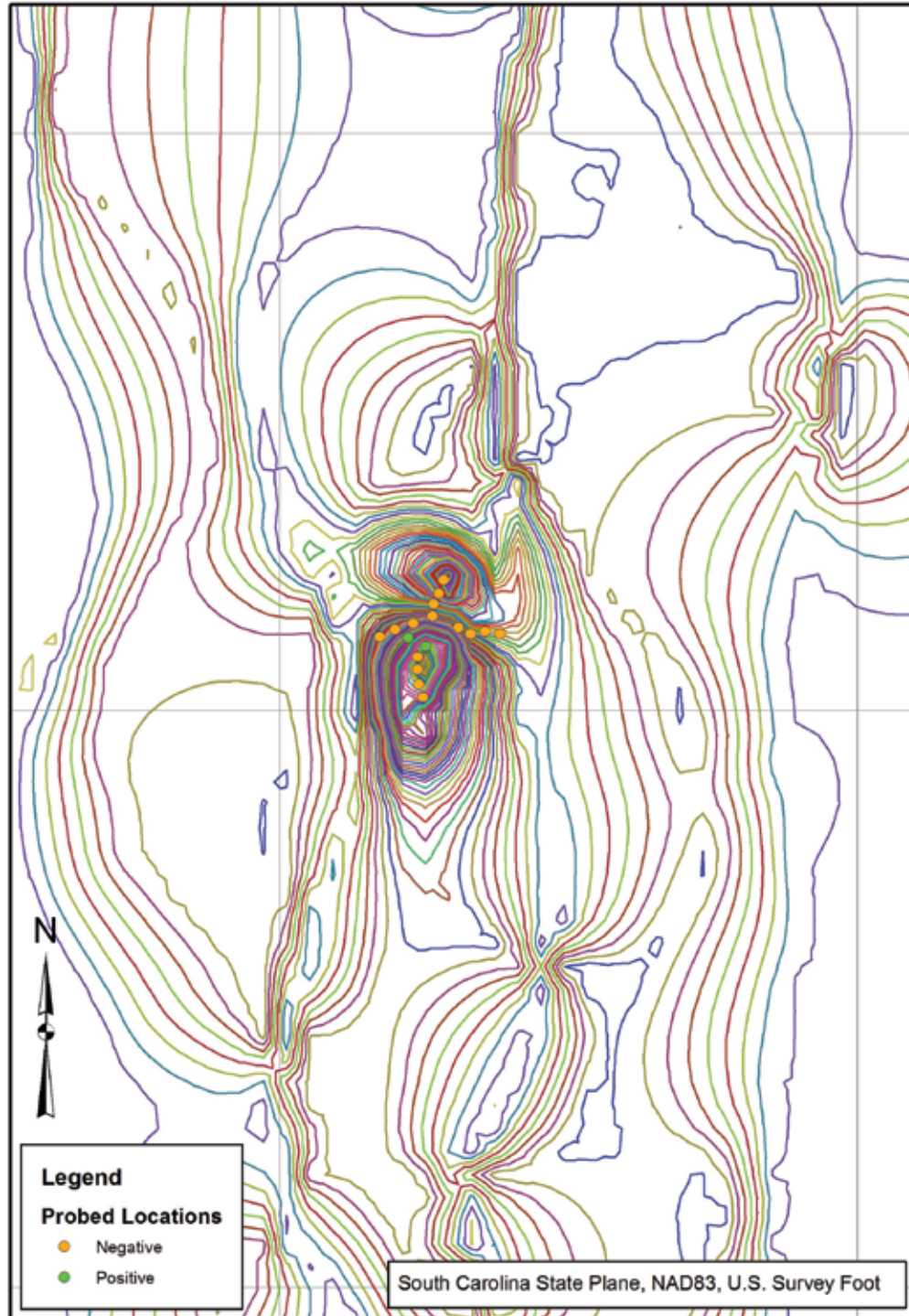


Figure 19. Probe locations at the high-priority anomaly cluster (Coordinates redacted).

CONCLUSIONS AND RECOMMENDATIONS

Historical and cartographic research identified a high-priority area for the remote-sensing survey designed to identify the surviving remains of the steamer *Planter*.

That area was expanded in the field to include additional survey lines east and north of the original area that would include more of the Cape Romain shoreline identified in the 1883 Coast and Geodetic Survey Chart.

Analysis of the magnetometer data identified a total of 26 individual anomalies in the combined survey areas. While 23 of those anomalies appear to represent debris (such as traps, pipes, rods, cable, wire rope, chain, small boat anchors and the like), one cluster composed of 3 individual anomalies has signature characteristics consistent with shipwreck material and could be associated with the *Planter* remains.

The high-priority anomaly cluster is located in the vicinity of the 1883 Cape Romain shoreline at the approximate time that *Planter* was beached and the machinery salvaged. The cluster represents the only site in the area surveyed that appears to have a potential association with *Planter*.

Probing to 11 feet on the site of highest magnetic intensity identified metal at two locations 9 feet below the bottom surface. More intensive probing in those contacts confirmed that metal within range of the probe consisted of small objects or small elements of material lying deeper in the sediments. Material contacted did not appear to represent large structures such as boilers, and no evidence of wood possibly representing hull structure was identified.

Based on the data generated by remote sensing and target testing it is apparent that the cluster of anomalies has a significant potential for association with the remains of *Planter*, however, confirmation will require additional investigation.

That research could be focused on either or both of two avenues of investigation. Conduct a survey to determine if there are additional high-potential anomalies in the vicinity of the historic Cape Romain shoreline. The absence of additional high-potential anomalies in the area may indicate that the anomaly cluster under investigation has an even higher probable association with *Planter*.

The second approach would be to focus on exposing material at the anomaly cluster under investigation, an approach that could identify material generating the signatures and possibly confirm that it represents *Planter's* remains. Research could focus on any surviving steam machinery, associated hull remains and diagnostic artifacts.

Since the early 1980s, shipwreck sites in shallow-water beach environments have increasingly interested archaeological and geomorphological investigators. Well-known examples of sites include wrecks wherein dynamic surf has preserved a nearly intact vessel; "buoyant hull fractures," in which an intact hull breaks up on a beach and its components are buried; or "buoyant structures" in which pieces of a hull wash in from offshore and are deposited and buried on a beach (Delgado 1997:58). This type of site has been archaeologically documented on the shores of Massachusetts (Cape Cod), North Carolina (Cape Hatteras), Alabama (Fort Morgan), California (Channel Islands and Ocean Beach in San Francisco), notably when storm events environmentally have exposed the previously buried hull or structure on a beach or in the intertidal zone. In this type of site, a probable comparative example for *Planter* would be the 1913 wreck of the wooden-hulled steam schooner *Pomo* in Drakes Bay, California (Archaeologi-

cal documentation of the site was done as part of a comprehensive survey of the bay by the National Park Service in 1982). A series of magnetic anomalies off Limantour Spit in the bay and on the spit itself were determined to be a cluster of wooden hull remains and steel and iron machinery from the wreck of *Pomo*, exposed when beach erosion stripped much of the sand from the spit in the winter of 1982-1983. The main portion of the wreck included the bottom portion of the hull with the engine attached to it (Murphy 1984:179-184). Given that *Planter* was lost in similar conditions, the formation of the *Pomo* site suggests the same archaeological signature for *Planter*, which would be consistent with the apparent characteristics of the probed anomalies.

Due to environmental conditions at the site, additional investigation to expose machinery and hull remains will have to be designed to mitigate the effects of sediment depth and tides. Traditional excavation employing induction dredges or airlifts will not likely produce the desired results. To compensate for the environment, consideration should be given to excavation with propeller wash systems that are capable of removing more sediment than tidal currents can replace. A second approach might be a jack-up platform equipped with industrial-scale induction dredges or airlifts. Both systems exist and have been employed in salvage operations in similar environments.

While there is a professional aversion to employing industrial techniques, this site environment virtually demands the controlled use of those means. *Planter's* remains represent a vessel that has been heavily salvaged and subjected to surf and some breakup before burial in sand. Unlike *Pomo*, which lay on a beach/intertid-

al zone that has not substantially changed since 1913, *Planter* wrecked in a beach and intertidal zone that has now shifted offshore due to environmental change. The surviving remains of *Planter* are now on an offshore shoal covered by as much as 10 feet of sterile overburden and water. With proper supervision, industrial means can be employed to efficiently reach diagnostic material that could identify the wreck without unacceptable damage to the surviving remains.

Systematic probing at the target site is recommended as the first course of action. Hydraulic probing to depths of 20 feet or more could identify additional structure, including the boilers. Additional probing could produce a more comprehensive plan of the distribution of surviving structure at the site and more precisely locate productive areas for excavation. Systematic hydraulic probing can be carried out

much less expensively than excavation regardless of the methodology employed to remove sediment.

The question now is one of what comes next. *Planter* is a vessel whose brief career captured the attention of the nation due to the heroic actions of Robert Smalls. The 150-year distance from the epic escape from slavery by those on board *Planter* has not diminished the importance of the event, the personalities or the ship; the story embodied by Robert Smalls and *Planter* is timeless. The fragmented, buried remains of *Planter*, lying under the sand and sea off Cape Romain, represent that story as a surviving entity that links the present day to the events of 1862. The *Planter* remains, lost in 1876 and subsequently broken and buried by the power of the sea, are not as visible or intact as the wreck of *Titanic*, or other wrecked vessels even more substantially intact. Therefore

the question of further archaeological intervention on the site to determine exactly which anomalies represent *Planter*'s shattered wood and twisted iron becomes a discussion of exactly what might be found and how well it might represent the story of that brave and well-planned escape from Charleston Harbor.

NOAA's Office of National Marine Sanctuaries is passing on to the State of South Carolina the data and the location of the anomalies we believe to be *Planter*; the decision on how to proceed will be theirs to make. Does that mean excavation and recovery, or does it mean marking this spot on the map and noting that here is where *Planter* came to an end? No matter what decision is made, history has told a powerful tale, and the story of Robert Smalls and the voyage to freedom on *Planter* will live on in the hearts of all who cherish liberty.

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APPENDIX A

Magnetic Target Table

All coordinates South Carolina State Plane, NAD 83, U.S. Survey Foot

Map Designation	Line	Target Number	Characteristics	Intensity (gammas)	Duration (feet)	X	Y	Recommendation
1	1	1	Dipolar	2	59	2508013.7	429131.0	None
2	9	1	Dipolar	42	346	2507603.7	428532.6	Additional Investigation
3	8	1	Multicomponent	515	215	2507566.7	428537.2	Additional Investigation
4	11	1	Multicomponent	32	239	2507532.5	428525.7	Additional Investigation
5	23	1	Dipolar	5	174	2506923.8	431342.9	None
6	25	1	Dipolar	8	126	2506813.6	431338.5	None
7	25	2	Negative Monopolar	10	160	2506808.6	428483.8	None
8	35	1	Dipolar	3	64	2506328.8	429530.4	None
9	35	2	Dipolar	3	99	2506306.0	429135.0	None
10	36	1	Dipolar	3	67	2506251.8	432401.8	None
11	36	2	Dipolar	90	53	2505807.3	429620.5	None
12	57	1	Dipolar	16	115	2505231.8	428645.3	None
13	57	2	Negative Monopolar	6	118	2505239.5	428469.9	None
14	63	1	Positive Monopolar	4	127	2504901.6	429614.1	None
15	63	2	Dipolar	9	63	2504921.4	428811.2	None
16	73	1	Dipolar	15	88	2504360.2	428099.5	None
17	79	1	Dipolar	2	35	2504128.0	429796.6	None
18	79	2	Negative Monopolar	9	61	2504106.1	428471.6	None
19	55	1	Dipolar	3	69	2505310.9	430385.8	None
20	55	2	Positive Monopolar	7	33	2505325.7	428635.2	None
21	51	1	Dipolar	2	49	2505512.5	429180.5	None
22	51	2	Dipolar	29	106	2505535.3	428739.8	None
23	49	1	Positive Monopolar	3	18	2505571.9	428774.4	None
24	47	1	Dipolar	36	107	2505703.5	429338.4	None
25	39	1	Dipolar	15	76	2506104.5	430533.5	None
26	19	1	Dipolar	5	103	2507109.3	429028.3	None

APPENDIX B

Cape Romain Shipwrecks

Vessel Name	Date of Loss	Type of Vessel	Casualty Location	Notes	Source
Unidentified	1520	Spanish nao	"near Cape Romain"	Spanish nao under Captain Lucas Vazquez de Ayllon.	Marx
Martha	1751	Scottish merchantman	"on Cape Romain"	Captain Shea, arriving from Canary Islands.	Marx
Unidentified	17 Feb 1759	Coasting Schooner	Raccoon Keys	from Santee, belonging to Col. Horry	Raynor
Judith	1759	English merchantman	"on Cape Romain"	Captain Martin; sailing from North Carolina to England.	Marx
Nancy	1775	English merchantman	"several leagues north of Charleston"	Captain Cumminham; sailing from London to North Carolina	Marx
America	1788	ship	"off Cape Romain"		
Unidentified	Sept 1804	ship	"on Cape Romain"	Captain Bunker	http://www.aoml.noaa.gov/hrd/Landsea/history/index.html
Spring	August 1815	English ship	"on Cape Romain Shoals"	Captain Smith, sailing Liverpool to Wilmington.	Marx
Spring	1815	brig	Raccoon Keys	Captain Job Colcock Smith,	Raynor
Ino	7 March 1815	ship	"near Cape Romain", near Raccoon Key	Owned by Wm. Gray, Boston. British frigate chased ship onto shoals and impressed 2 crew. Vessel broke up after abandonment by crew.	Niles Weekly Register
Diamond	1816	Spanish pirate schooner	"outer shoal of Cape Romain"	Salvaged by Dr. E. Lee Spence	http://www.facebook.com/album.php?aid=2019751&id=1109236999
Spey	28 Nov 1840	British navy packet	"wrecked on Raccoon Key"		Clowes
Chase	26 April 1862	schooner	"on Raccoon Key"	Chased onto reef by USS Onward.	Gaines
United States	6 April 1881	steamer	"went ashore near Cape Romain"		NY Times, 7 April 1881
Unidentified	1890s	barge	"off Cape Romain"	24 Civil War-era cannon found on barge remains	http://www.oregongenealogy.com/baker/baker/memorial_cannon.htm
Ozama	21 Nov 1894	steamer	"Sank off Cape Romain"	Formerly steamer Craigillion built in Scotland, 1881; sank in 6 fathoms of water	http://www.theshipslist.com/ships/lines/clydeline.htm
William M. Bird	1 Nov 1899	schooner	"off Cape Romain"		Appletons
Leif Erickson	Feb-05	Norwegian freighter	Bulls Bay	84' depth	http://www.charlestondiving.com/forums/lofiversion/index.php?t1337.html

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MARITIME HERITAGE

NOAA's National Marine Sanctuaries

National marine sanctuaries are living classrooms where people can see, touch and learn about our nation's maritime heritage treasures.

Our mission is to protect, promote and explore our maritime heritage through a national program embracing heritage resources in our evolving coastal, marine and Great Lakes stewardship.

www.MaritimeHeritage.NOAA.gov

- Current Project Updates
- Expedition Reports
- Field Updates

Did You Know?

- Maritime heritage resources are physical, such as historic shipwrecks and prehistoric archaeological sites, as well as archival, including oral histories, traditional seafaring and the knowledge of traditional cultures.
- The Maritime Heritage Program documents, inventories and protects over 300 known shipwrecks and prehistoric sites in our sanctuaries.
- Maritime heritage resources play a major role in demonstrating the relevance of the oceans to our past, present and future lives.

Program Highlights

Exciting Expeditions

Archaeologists and historians study sanctuary maritime resources including the shipwrecks of Thunder Bay, the cultural sites at the Olympic Coast and the search for the lost Civil War submarine Alligator.

State of the Art Technology

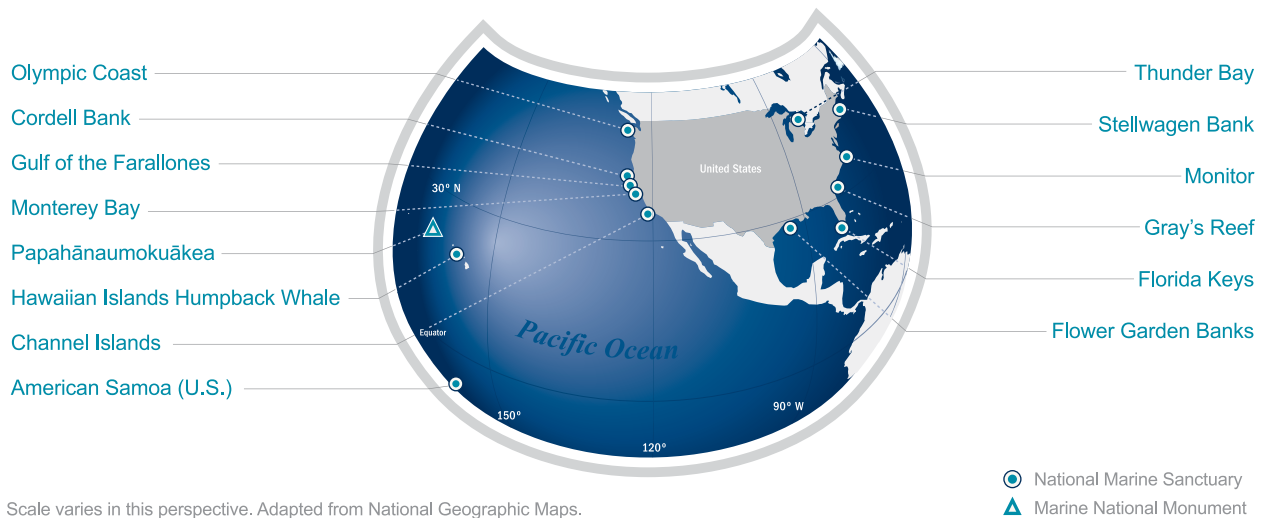
Side scan sonar, magnetometers, remotely operated vehicles (ROVs) and mixed-gas diving provide the technical support for cutting-edge research and discoveries.

Preservation Through Education

As part of responsible stewardship, the Maritime Heritage Program designs and implements a variety of programs to educate the public about the importance of protecting and preserving our maritime past.

THE NATIONAL MARINE SANCTUARY SYSTEM

The Office of National Marine Sanctuaries, part of the National Oceanic and Atmospheric Administration, serves as the trustee for a system of 14 marine protected areas encompassing more than 170,000 square miles of ocean and Great Lakes waters. The 13 national marine sanctuaries and one marine national monument within the National Marine Sanctuary System represent areas of America's ocean and Great Lakes environment that are of special national significance. Within their waters, giant humpback whales breed and calve their young, coral colonies flourish, and shipwrecks tell stories of our maritime history. Habitats include beautiful coral reefs, lush kelp forests, whale migrations corridors, spectacular deep-sea canyons, and underwater archaeological sites. These special places also provide homes to thousands of unique or endangered species and are important to America's cultural heritage. Sites range in size from one square mile to almost 140,000 square miles and serve as natural classrooms, cherished recreational spots, and are home to valuable commercial industries.



The Office of National Marine Sanctuaries is part of NOAA's National Ocean Service.

VISION – People value marine sanctuaries as treasured places protected for future generations.

MISSION – To serve as the trustee for the nation's system of marine protected areas to conserve, protect and enhance their biodiversity, ecological integrity and cultural legacy.

