



Archeology Program

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Underwater Survey at Colonial NHP

When Captain John Smith observed the waters surrounding Jamestown Island four centuries ago, he was impressed by the sheer quantity of fish. Today archeologists are impressed by the quantity of archeological resources discovered between the waterline and as far as 1000 feet offshore. Careful scanning with sonar as well as diving in the murky water revealed at least 26 shipwrecks, as well as landings, wharves, and piers along the shoreline.

Jamestown Island, situated in southeastern Virginia, 30 miles up the James River from the mouth of the Chesapeake Bay, was the site of the first permanent English colony in North America. While Jamestown's 1639 brick church tower is the only standing vestige of the colony still visible above ground, archeological investigations have located foundations of buildings dating from the Jamestown Colony's earliest days through the Civil War, including remnants of the original 1607 James Fort. This first English fort on the island, long thought to have been destroyed by the eroding James River, was re-identified in 1994. Recently, however, archeologists at Colonial NHP, which jointly administers Jamestown island with the Association for the Preservation of Virginia Antiquities (APVA), have become interested in the aquatic cultural resources, as well as the terrestrial ones. Between July 5 and July 15, 2006, a team of underwater archeologists explored the waters around the Jamestown Island in a survey of the 7.8 mile perimeter of the island.

A Brief History of Jamestown Island

On May 13, 1607, three English ships—the *Susan Constant*, the *Godspeed* and the *Discovery*—anchored off Jamestown Island and thus established England's first permanent foothold in North America. The 104 Englishmen who landed that day chose Jamestown as the location of their new settlement partially because no one else was presently occupying the island: an unhealthy, if highly defensible, spot. This lack of inhabitants was hardly the case for most of Tidewater Virginia, as the English were soon to discover. Although it is difficult to estimate, modern historians number the Native American population of the early 17th century Tidewater Virginia at 13,000 to 14,000. Indian settlements belonging to the geographically extensive and politically powerful Powhatan chiefdom were concentrated along the James, York, and Rappahannock Rivers, which provided both food and transportation.

Lord Charles Cornwallis's British Army of 7,000 soldiers established a camp on Jamestown during the summer of 1781, and "cartel vessels" of American and British prisoners were periodically exchanged on the island between July 1781 and November 1782. In 1861 the island was occupied by Confederate soldiers who built Fort Pocahontas, an earth fort immediately adjacent to the Jamestown Colony's old brick church tower as part of the Confederacy's defense system to block the Union advance up the James River. Little further attention was paid to Jamestown until preservation was undertaken at the close of the nineteenth century.

In 1892 Jamestown was purchased by Edward and Louise Barney, a couple from Dayton, Ohio. Soon afterwards, the Barneys deeded 22 ½ acres of their newly-bought land, including the 1639 brick church tower, to the APVA. By this time, the James River erosion had eaten away the island's western end; visitors began to conclude that the site of James Fort lay completely underwater. With federal assistance, a sea wall was constructed in 1900 to protect the area from further erosion. In 1934 the island's remaining 1,500 acres were purchased by the NPS for \$165,000 as part of the newly-established Colonial National Monument. Today, Historic Jamestowne is jointly operated by the APVA and NPS.

The Submerged Cultural Resources Survey Project

To the untrained eye, the waters surrounding Jamestown Island today look unusually natural and well preserved, mimicking the untouched landscape that the first English settlers saw nearly 400 years ago. Great blue herons stalk the muddy shores of the Back River and the Thorofare, while bald eagles and ospreys fly high over the marsh grass, cypress trees and yellow pines that line the north edge of the island. Dragonflies zip through the humid morning air, skipping low over the lazy brown stream of water as it meanders around Pyping and Black points, then empties into the broad shoulders of the James River.



Jamestown Island. James Fort, New Towne, and NPS visitor center are located in lower left curve of the island, just below the causeway. (NPS photo)

This serene landscape, however, contains evidence of Jamestown's past. Working with Colonial NHP archeologist Andrew Veech, a team from BRS Cultural Resource Specialists led by Stephen Bilicki began surveying along the water's edge on July 5, 2006. Using a side-scan sonar device over the side of the boat, the team spent more than a week trolling back and forth along the shore, searching for the distinctive acoustical signatures produced by manmade features.



Graduate student Jodi Carpenter helps locate and document underwater archeological resources off the coast of James Island.

Two other similar surveys have been conducted in the past, both of them focused on the stretch of the James River that runs along the site of the historic 1607 fort, but this is the first attempt to take a comprehensive look at all the waterways adjacent to the 1,500-acre island. The search extended from the water line to as much as 1000 feet offshore. Restricted by the sensitive sonar equipment to a speed of three knots, the pace is slow, with hours of steady, back-and-forth trolling required in order to get complete coverage of the bottom.

Six different electronic monitors were utilized to relay information about the vessel's geographical location, direction, and orientation, in addition to a detailed stream of sonograms from the bottom. These patterns were interpreted by Bilicki, whose experience allowed him to decode the patterns of lines that pop up on the computer screens. The sonar data provided an estimate of the size of the wrecks on the bottom, which was verified by visual inspection. Veech and Jodi Carpenter, a graduate student in maritime studies at East Carolina University, supplemented these data with measurements, challenging to take in the no-visibility water.

Probing the target with their feet, Veech and Carpenter picked out the gunwales and frames of the vessel identified by sonar, then encountered the timbers that make up the floor. To measure the vessel, they stood shoulder deep in the water and stretched an engineer's measuring tape over the submerged wooden hulk. Ducking under the surface, the divers mark the measurements with their fingertips, then returned to the surface to shout their readings to intern Steve Brock of the Indiana University of Pennsylvania. Barnacles, spikes and other shinbusters slowed the job. But, ultimately, the numbers begin to coalesce, forming a picture of a ferryboat hull 14 feet wide and 53 feet long.

Survey results

In just 10 days of work, Veech and his research team have identified 70 potential archeological sites while surveying the waters around the 7.8-mile perimeter of the island. Among their finds are 26 shipwrecks, including numerous barges approaching 100 feet in length as well as a 72-foot-long skipjack. Landings, wharves and piers have cropped up frequently along the once busy shoreline, too, including one that may be linked to early 17th-century Virginia governor George Yeardley.

The tremendous quantity of sonar and GPS data captured during the July underwater survey are just now being analyzed, but further, more definitive reports of the survey team's findings soon will be made available. Although many of the newly-identified submerged sites likely post-date the 17th-century Jamestown Colony, it seems unlikely that all of them do. Ultimately, only more field research-and more diving-will enhance understanding of Jamestown Island's many submerged cultural resources. As the 400th anniversary of the Jamestown Colony approaches, a new chapter in Jamestown archeology has begun.

A newspaper feature for The Daily Press by Mark St. John Erickson, (Diving into the Past; July 15, 2006) contributed to this report.

For more information, visit [Colonial NHP](#)

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