

Pamunkey River Project: The 2006 Field Season

By Steven Anthony



D. Shaw and S. Anthony document the framing pattern of one of the Pamunkey River vessels, Hull #1. Photos in this article by B.Utley, J.Smailes, D.Knepper.

Virginia's Pamunkey River has witnessed a long span of American history. Deriving its name from the Algonquian tribe that lived along its banks, the Pamunkey was the scene of early colonial exploration, settlement and trade. During the Civil War, the Union supply depot for campaigns on Richmond in 1862 and 1864 was at White House, a property belonging to the Custis family and the site of Martha Dandridge Custis's marriage to George Washington. In the spring of 1862, the Confederates scuttled over 60 schooners and steamers in the river in an attempt to delay the advance of combined U.S. amphibious forces.

Research and surveys conducted by MAHS indicate the presence of numerous historic shipwrecks in the river related to Civil War and possibly other historic events. As part of its ongoing commitment to study and document these shipwrecks, MAHS deployed teams of divers to continue field research throughout 2006.

In the spring edition of *MAHSNEWS*, the article titled "Ongoing Research on the MAHS Pamunkey River Project" described the mapping and recording efforts of MAHS volunteers during February 2006. This work focused on the unidentified hull remains designated as Hull #1. The article also described the March, 2006 expedition in which MAHS volunteers conducted a thermal imaging survey of the grounds surrounding White House. MAHS teams returned to White House in June and September 2006. This article focuses on the documentation and assessment of specific shipwrecks during those field operations.

The work MAHS has undertaken at White House is centered on Civil War-era shipwrecks. Early in the War, General George B. McClellan began moving his Union Army of the Potomac up the York River toward Richmond in an offensive known as the Peninsula Campaign. The objective was to take Richmond by attacking the city from the south. McClellan moved his troops up the York River and established a supply depot at White House on the Pamunkey River. At the time this was the largest combined land and water military force ever assembled on this continent. Nevertheless, the Union campaign stalled in July 1862. McClellan abandoned his depot at White House and subsequently moved operations to the James River. The remains that are the focus of current research that MAHS is conducting on the Pamunkey River are thought to be from this campaign.



B. Terrell (right) briefs the field crew (left to right: J. Edwards, J. Craig, J. Beason, T. Berkey) on the project and research goals.

June Expedition

From June 17 to 18, MAHS conducted fieldwork at White House in conjunction with the annual MAHS Field School in Underwater Archaeology. Students, instructors and MAHS members worked together to complete the mapping and survey work of this phase of the project. The students were very excited to participate in this work and were immensely helpful in collecting the needed data.

On Saturday, June 17, 2006, the first day of the project, MAHS members Steven Anthony, Tom Berkey, Dennis Knepper, Dave Shaw, Bill Utley, and Jim Smailes worked under the direction of Bruce Terrell, Principal Investigator, to assess current river conditions and review the work plan. MAHS students John Craig, Johnny Beason, Jeff Edwards, and Gary Schmidt completed a dry land training exercise in baseline trilateration under the direction of Tom Berkey, and then joined the rest of the MAHS team to assist with the fieldwork.

The first order of business was to document the remains of Hull #4, which had been identified during a shoreline survey conducted in prior years. Students worked under the supervision of Tom Berkey and Jim

Smailes as the tide receded and the timbers became exposed. The ends of the hull were identified, although it was not possible to distinguish the bow from the stern. A baseline was set with the zero-end closest to the shoreline. The orientation along the baseline was recorded at 215 degrees and the length of the hull was determined to be 29.5 meters. The team then proceeded to make detailed drawings of the frames and other visible details of the wreck.

While this work commenced, Dave Shaw paddled his kayak down the river to Hull #1 for a visual inspection. Steve, Bruce, Bill and Dennis joined him and exposed the area thought to be the stern of the vessel in order to measure and photograph extant timbers that appeared to be the keel and keelson. Dennis worked along the shoreline to create an overall map of the site showing the relationships between each of the hulls structures found. Also included on the map were prominent shoreline features and datum points established during the February expedition. Several artifacts were found during the course of this work including a lump of coal, length of rope, and a heavy piece of metal identified by Bill Utley as an artillery shell fragment. As the tide continued to recede, Hull #2 became exposed and we laid a baseline along its centerline. The orientation was recorded at 216 degrees and the length was determined to be 28.6 meters. Dave and Jim worked to establish a beam measurement and document the exposed timbers. Hull #5 remained

submerged during the day, but despite the returning tide, measurements were obtained as best as possible by feeling along the timbers.

On Sunday, June 18, the team returned to the site at about 8:45 am. The tide was still high and Hull #4 was submerged. So, the team prepared to perform zero-visibility search dives beyond the known hulls to determine if any other wrecks or archaeologically significant material lay in deeper water. Although the dive teams identified a number of fallen trees in the water, no other hull structures were found. After lunch the tide had receded to the point where the team could resume recording measurements and documenting Hull #4. Around 2:00 PM, John Craig announced that he had found an artifact lodged beneath the keelson. On further examination, Craig removed a live rim fire round that had been lying between some timbers. The round was carefully examined, measured, and photographed and then was reburied *in situ*. Dave Shaw used the photo-documentation later in the week to identify the artifact as a Spencer 56/56 caliber round. He also found that this type of round did not enter into service until 1864. This created an apparent dilemma since the hulls were initially thought to be part of McClellan's 1862 fleet. The round may in fact be a remnant of Grant's use of the area in support of his 1864 campaign on Cold Harbor. Tom Berkey's research among documents from the Library of Congress has determined that some of the canal boats pictured in historical photographs of the shoreline at White House Landing were not chartered until 1864, further implying that the site may be more complex than our original interpretation suggests.

As the tide receded in the afternoon, timbers from Hull #5 became exposed and better measurements on this structure became possible. The team seized the opportunity to get all the measurements they could before high water returned at 4:45 PM.

A review of the data collected indicated that the two days had been a very successful operation. A new class of students gained hands-on experience in mapping and survey work, and the MAHS team acquired enough information to create an overall site plan and scale drawings of Hull #1, 2, 4 and 5. Hull #3 remained a mystery however, and could not be relocated.

The overall site map which we completed revealed some important information. Two of the hull structures, Hull #1 and Hull #2, appeared to be aligned side-by-side, extending from the shore out toward the deeper water. Subsequent archival research found period photos depicting barges moored together in parallel to form a makeshift wharf. The alignments revealed by the overall site plan seem consistent with the notion that the hulls that we were working on could be the remains of a

Union barge wharf. Additional research will be needed before this can be definitively concluded, while the mystery of the Spencer 56/56 round dating to 1864 remains unresolved.

September Expedition

MAHS returned to White House on September 23 and 24, 2006. The principle objectives this time were to relocate Hull #3, which had tentatively been identified in the October 2004 expedition, and to obtain further data needed to complete the hull drawings and overall site map. The team consisted of Steven Anthony, Tom Berkey, Dave Shaw, and Dennis Knepper. Saturday, September 23 was overcast and breezy. Low tide was scheduled to arrive at 9:00 am, so we needed an early start in order to stage our gear and gain the advantage of maximum low water.

Several survey sweeps were planned to locate Hull #3. These semi-circular arcs were conducted using datum points associated with Hull #2. The sweeps were carried out by means of a 16-meter line secured to the datum points. Three strategic points were selected to serve as datums, including the terminus of the Hull #2 baseline, the origin of the Hull #2 baseline, and a secondary point northeast of the Hull #2 origin point.

While the survey was not successful in relocating Hull #3, several large tree trunks were encountered and plotted on the existing shoreline map. In addition, the areas surveyed by the divers that were found to contain no nautical debris were also documented. It was very difficult working in shallow water with a fast current, so the divers had to overweight themselves to stay on the bottom and remain on course. After a couple of hours, the tide had turned, and the incoming current backed by surface winds made working conditions so difficult that the team left the water, terminating the underwater survey. The team spent the remainder of the day relaxing and sorting their paperwork. Steve and Dave went on a driving tour of the neighboring Pamunkey Indian Reservation and returned just in time for dinner.

Sunday, September 24 was clear but very windy. Low tide was scheduled to arrive at 10:00 am, but the combined wind and water conditions created a safety concern and diving activities were cancelled for the day. However, in spite of winds blowing upstream, from the south, the tide was particularly low, revealing features of the shoreline wrecks (Hulls #1, 2, 4, and 5) that had not been visible during the expedition in June. The team used the day to obtain additional measurements on the exposed features of these hulls.

The frames of Hull #4, for example, were further documented, including part of the deadwood assembly at the south end of Hull #4 that was drawn and measured.



Top: T. Berkey supervises the underwater search around Hulls #4 and #5; middle: J. Beason, J. Craig, S. Anthony, and D. Shaw discuss the initial findings of the underwater survey; bottom: J. Beason and J. Craig collected detailed measurements on Hull #4.


In spite of the low water levels, the north end of Hull #5 was not exposed enough to allow additional data to be collected efficiently. However, the fact that the structure does remain consistently submerged even at lowest tide suggests that it may be better preserved than the portions of other hulls that are regularly exposed to the drying effects of the air. In contrast to the north end of the hull, more of the south end of Hull #5 was revealed than had been the case in June, and the team took this opportunity to obtain additional drawings and measurements of the structures there.

Examination of both Hull #4 and Hull #5 allowed the team to observe that there was no evidence of a keel at the end of either vessel. Instead, a wide plank was noted on the bottom of each hull below and parallel to the keelson. We have only observed this plank feature at the ends of the hulls, and it is possible that the keel had been tapered to allow the bow or stern to fair upward. Yet, if the plank continues the entire length of the hull in place of a heavy keel, then this feature, along with the flat bottoms of the hulls, would imply that the vessels were designed for river work, where shallow draft would be a premium and leeway would not have been an issue.

Additional data was also collected from Hull #2 and Hull #1. The deadwood assembly at the north end of Hull #2 was drawn and measured. This hull also appeared to have been furnished with a heavy, centerline plank rather than a keel at the north end. The framing patterns of both Hulls #1 and #2 were further documented, including the pattern of fasteners on Hull #1. No keelson was visible on the exposed portion of Hull #1, but the pattern of large iron pins (drifts) on the hull was similar to the pattern observed on other hulls documented in the survey, indicating that a keelson had once been present. The keelson appeared to have completely weathered away on the exposed portions of this vessel. Unlike the other hulls, where every frame was secured to the keelson with a drift pin, only alternate frames on Hull #1 exhibited iron pins along the centerline. Several frames without center pins exhibited the ends of spikes driven from the underside of the hull planks through the frames outboard of the centerline near what would have been the turn of bilge.

As the tide once again rose to cover the hull remains, the team returned to shore to review and organize the data they had collected. Everyone agreed that despite the poor diving conditions, it had been a very productive weekend. In fact, the team concluded that they had obtained enough data to begin work on a full report documenting the site. However, as in any archaeological project, unanswered questions linger. The location and nature of Hull #3 remains a mystery,

and the MAHS team plans to return in 2007 for another attempt to locate and document it.

Copies of historical documents and photographs related to research MAHS has conducted for this project, along with photographs from various field expeditions, can be found on the Pamunkey Project blogsite at <http://pamunkey.blogspot.com/> 

Additional photographs follow on the next two pages.



Clockwise from the upper left: historical photograph of White House Landing dated 1862; B.Terrell and S.Anthony document Hull #1; J.Edwards and G.Schmidt document Hull #4 as the tide rises; J Smailes photographs details of Hull # 1; D.Shaw conducts a kayak survey.



Clockwise from the top: field school participants document frames on Hull #4; details of the south end of Hull #1; S. Anthony records measurements on Hull #4; artifacts from Hull #1, including bottle glass, coal, rope, artillery shell fragment, and wood; historical photograph of barges moored parallel to the shoreline at White House to create a temporary wharf; Hull #5 emerging at lowest tide.