ensuring that all those who wished a voice in this process were guaranteed that voice.

Repatriation and Beyond

Through more than five years of active consultation, MCBH found that trust from the claimants was earned through our perseverance and commitment to bringing repatriation to a successful end. Once repatriation was finalized, a majority of the 21 recognized Native Hawaiian claimants, who ultimately became "owners" of the Mokapu *iwi kupuna* (Hawaiian phrase for "bones of the ancestors"), submitted to MCBH written requests for support and permission to rebury their ancestral remains on the Mokapu peninsula and thereby allow for their ancestors to "return home."

The United States Marine Corps is a combat organization whose mission is one of military

readiness and global projection of operating forces. Though reburial of Native Hawaiian ancestral remains is not required under NAGRPA and is not essential for global military readiness, the Marine Corps has nevertheless supported this reburial request because it is the right thing to do. The Marine Corps takes its resource stewardship responsibilities seriously, and MCBH is committed to providing such stewardship for the remains of those who first resided on the Mokapu peninsula.

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David L. Conlin

Recovery of the Confederate Submarine *H.L. Hunley*

istorians point to the March 9, 1862, engagement between the Union ironclad USS Monitor and the Confederate ironclad ram CSS Virginia in Hampton Roads, as a pivotal moment in the development of modern naval warfare. Though most would argue that the obsolescence of wooden ships of sail was vividly demonstrated in Virginia that day, fewer are able to appreciate that an equally significant development in naval warfare—the first successful attack on a surface ship by a submarine—occurred just two years later off the coast of Charleston, South Carolina. While the tactical and strategic impact

As this issue of *CRM* goes to press, archeologists have almost completed the excavation of *Hunley*'s interior, which filled with sediment following the sinking in 1864. Remains of eight of the crew have been found, and it is likely that the ninth crewmember will be recovered as well. To date, the reasons for *Hunley*'s loss remain a mystery. For the latest infomation, go to http://www.hunley.org.

of armored battleships crested and then declined in the first half of the 20th century, the implications of that first submarine attack continue to affect global geopolitics and strategic thinking today.

Submarine warfare during the Civil War emerged largely as a Confederate response to the Union blockade of southern ports. Within the tightly constrained context of the blockade emerged a remarkable drama of actions and reactions, causes and effects, and technological innovations and responses that culminated dramatically in naval combat off Charleston in early winter 1864.

In 1864, the northern blockade was in full force, and its crippling economic effects had begun to bite deeply into the South's ability to fight the war. Unable to compete at an industrial level with the Union, the Confederacy turned to technological and tactical innovation to break the Federal stranglehold on southern ports, sometimes with spectacular results.

On February 17, 1864, the tiny Confederate submarine *H.L. Hunley*, under the

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H.L. Hunley in its excavation trench prior to recovery. Computer simulation by Mike Skrab, Oceaneering Advanced Technologies, courtesy Friends of the Hunley.



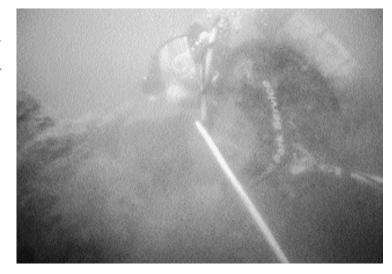
command of Lieutenant George Dixon, slipped from the shores of Charleston Harbor on the outgoing tide, aimed itself at the Union blockade ship USS *Housatonic* and prepared for what was to become a singular milestone in naval history—the first ever successful submarine attack on an enemy ship. With a crew of eight turning the hand crank that powered the submarine, Dixon steered four miles out to sea toward the Union blockade fleet.

As *Hunley* drew near *Housatonic*, lookouts in the rigging spotted what seemed to be a log, then a porpoise, and finally the attacking submarine. While the alarm was sounded, the Union ship slipped its anchor, backed its engine, and frantically tried to avoid the attack. As the crew and captain of the blockader fired pistols, rifles, and shotguns at the tiny sub, *Hunley* rammed a 135-pound black powder charge into the stern quarter of *Housatonic* directly adjacent to the

powder magazine, backed off, and blew the entire starboard stern quarter off the Union ship. After a massive explosion, Housatonic settled to the shallow bottom as sailors in their underwear scrambled into the rigging to await rescue. Hunley signaled the success of the attack and then disappeared into the night. Hunley's commander, George Dixon, and his crew of eight men, the third and final crew to meet disaster in the submarine, also disappeared. Hunley was to remain lost for 131 years.

In May 1995, after an exhaustive search, archeologists sponsored by author Clive Cussler's research organization, the National Underwater and Marine Agency (NUMA), successfully located the submarine buried beneath three feet of mud and sand outside Charleston harbor. In 1996, with funding from the Department of Defense Legacy Resource Management Program and other private and government sources, a joint team of archeologists drawn from the National Park Service Submerged Cultural Resources Unit (NPS), the Underwater

Archaeology Branch of the Naval Historical Center (NHC), and the South Carolina Institute of Archaeology and Anthropology (SCIAA) returned to coordinates provided to the Navy by NUMA to confirm that the object found was the remains of H.L. Hunley, assess the condition of the submarine, and recommend a course of action for the wreck.* Based on the 1996 assessment and the threat posed to the site by looters, the decision was made to recover the submarine for conservation and perpetual curation in South Carolina. Archeologists from the NHC, NPS, and a number of federal and state institutions and organizations working with engineers and consultants from Oceaneering Advanced Technologies, systematically examined and modified technical options for *Hunley's* recovery, based on information obtained from the assessment. and subsequent findings. This cooperation cre-



NPS Archeologist Matt Russell mapping the stern of H.L. Hunley. Diving conditions on site were difficult, with low to zero visibility the norm. Photo by Brett Seymour, NPS, courtesy Friends of the Hunley and National Geographic.



August 8, 2000 8:45 a.m., Hunley and frame are safely lifted from the bottom and placed on the transport barge. Photo courtesy Tim Smith, NPS.

ated a feasible plan that was implemented during the summer of 2000. At the same time, archeologists from the NHC, NPS, and SCIAA briefly examined the wreck of USS *Housatonic* and worked out myriad bureaucratic and management details within the framework of the programmatic agreement signed between state and federal management authorities in 1996.

Fieldwork for *H.L. Hunley*'s recovery commenced on May 5, 2000, nearly five years to the day from when the submarine was discovered by Cussler's NUMA team. While *Hunley* was being prepared for recovery, archeologists working with geologists, sedimentologists, micro- and marine biologists, corrosion specialists, and water chemists collected scientific information pertaining to site formation processes, *Hunley*'s interior and exterior environments, and overall state of preservation. During the next several months, the submarine was carefully excavated from the sediments that surrounded it and gently suspended from a series of slings attached to a truss that stretched over the submarine.

On August 8, 2000, at 8:40 a.m., the first submarine to sink another warship was successfully raised from the floor of Charleston harbor and placed on a barge for transport to shore. By 6:00 p.m., this extraordinary piece of American and world history was safely placed in a tank of fresh water at a state-of-the-art conservation facility in North Charleston. The entire project was documented by teams from the National Geographic Society and South Carolina Educational Television.

Ultimately, *Hunley*'s recovery represents a model of federal, state, and private sector united in service to an archeological resource of extraor-

dinary importance. The *Hunley* project drew on the talents of hundreds of agencies and businesses at the formal and informal level and the success of the recovery is directly attributable to the thousands of contributions, both large and small, that were made by these individuals and groups. Cooperation, focused on preservation, has produced tangible results and placed this treasure of American and world history in the hands of generations to come.

Note

* Larry E. Murphy, Daniel J. Lenihan and Christopher F. Amer, "Conclusions and Recommentations," *H.L. Hunley Site Assessment*, Cultural Resources Management Professional Papers, Number 62 (Santa Fe: National Park Service, 1998).

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Dr. Robert Neyland of the Naval Historical Center, on loan to the state of South Carolina's Hunley Commission, directed the Hunley recovery project. This project involved archeologists and professionals from the National Park Service Submerged Resources Center and Fort Sumter National Monument, South Carolina Institute of Archeology and Anthropology, South Carolina Division of Archives and History, the College of Charleston, and NUMA. Oceaneering Advanced Technologies provided the engineering and technical expertise for the recovery. The Department of Defense Legacy Resource Management Program, the State of South Carolina and the private non-profit group, Friends of Hunley, chaired by Warren Lasch, provided funding for the project. The South Carolina *Hunley* Commission, chaired by Senator Glen McConnell, provided policy and management oversight for the recovery.

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