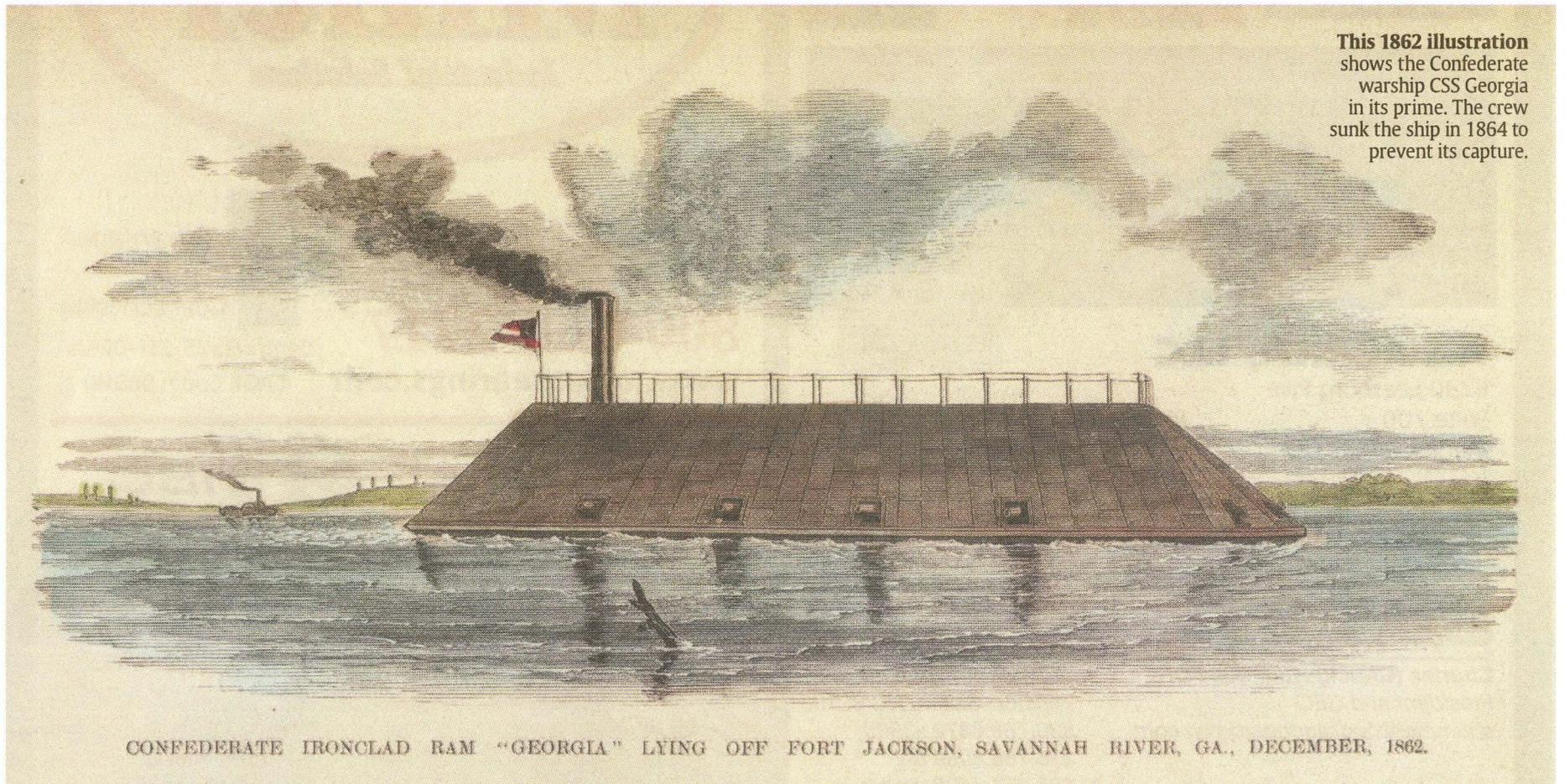


PRESERVATION

WHEN THE PAST SURFACES



This 1862 illustration shows the Confederate warship CSS Georgia in its prime. The crew sunk the ship in 1864 to prevent its capture.

CONFEDERATE IRONCLAD RAM "GEORGIA" LYING OFF FORT JACKSON, SAVANNAH RIVER, GA., DECEMBER, 1862.

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While maintaining vital waterways, USACE protects and preserves America's submerged history

By Pam George

BUILT IN 1862, the CSS Georgia was designed to protect Savannah during the Civil War. But it never fired a round, and on Dec. 21, 1864, its crew scuttled the gunboat to prevent its capture.

Nearly 150 years later, the gunboat is still making headlines. It rests in the path of the Savannah Harbor expansion, which will deepen the channel from 42 feet to 47 feet. Consequently, the Confederate icon must leave its grave.

The process is painstaking. "This is an archaeology data recovery project," said

Julie Morgan, an archaeologist with the U.S. Army Corps of Engineers Savannah District. "We're looking at three months of archaeological field work even before the first piece is recovered, and the recovery phase might be three or more months."

That's business as usual for the Corps, which maintains waterways for commercial and recreational use. On rivers and in ports that have experienced centuries of traffic, echoes from the past often rise to the surface.

The Corps routinely surveys waterways to pinpoint potential obstacles. Dredging — which brings up silt, sand and sediment during routine maintenance, channel-

deepening or beach-replenishment projects — can be a first indication that there's something unexpected directly below.

Even a documented shipwreck can undergo changes. In 2003, for instance, Hurricane Isabel exposed more of a known wreck in Lynnhaven Inlet in Virginia Beach, Va. "It could have caused (a) potential hazard to navigation," said Keith Lockwood, an environmental scientist with the Norfolk District.

Dredging in 1983 first impacted the Georgia, raising it about 10 feet towards the surface. Its top elevation went from 28 feet in 1980 to 38 feet.

When the unexpected appears, work halts for surveys. Tools might include side-scan sonar, which creates images of the seafloor; magnetometers, which detect ferrous metal; and a high-resolution multi-beam sonar survey, which can identify objects and features within inches of their actual location.

Surveys are also conducted before major projects. "Every time we make alterations, widen or deepen the channel, we go through the same drill," said Brian Williams, project manager for the Charleston Harbor Post 45 deepening feasibility study,

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PRESERVATION



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A piece of the Civil War ironclad warship CSS Georgia was retrieved by Corps archaeologists, aided by divers and salvage operations teams from the U.S. Navy in 2013. The warship rests in the path of the Savannah Harbor, Ga., expansion.

which found 420 anomalies during surveys, including possible debris from a bridge replacement.

If the site isn't a threat, it might remain untouched or receive a buffer zone of protection. For the Folly Beach (S.C.) Storm Damage Reduction Project, the Charleston District and the state historic preservation office established a 300-foot "no dredge" area around what surveys suggested was a wooden-hull shipwreck.

Other sites, though, are obstructions. While conducting surveys for the Texas City Ship Channel widening project in 2005, the Galveston District found the USS Westfield, a Civil War-era ferryboat-turned-gunboat. The ship, which ran aground during the Battle of Galveston, was sunk on New Year's Day 1863 to avoid capture.

Using divers, an electromagnet and a clam dredge, which scooped up artifact-laden sediment, the USACE removed items in 2009. "Cannonballs were identified in all phases of the discovery," said John Campbell, an archaeologist in the Galveston District. Also recovered: a 10,000-pound cannon and massive boiler parts. The site is now exhausted, but there is "still much we can learn from artifacts that were recovered," he said.

The Lynnhaven Inlet wreck, which belongs to the Commonwealth of Virginia, required removal because the channel had to dogleg around it. Artifacts from what

was likely an 18th- or 19th-century sloop or schooner included ballast stones, the wooden hull and keel, a pewter spoon, cannon and cannonballs.

The Corps often works with contractors for surveying and artifact retrieval since not all districts have divers on site. Universities may also get involved. Preservation experts at Texas A&M University worked on the Westfield retrieval. The university conducted an initial investigation of the Georgia site in 1979 and 1980. At that time, they found the vessel was largely intact.

Raising the Georgia will cost an estimated \$9.5 million, part of the mitigation effort on the \$652 million harbor

expansion project.

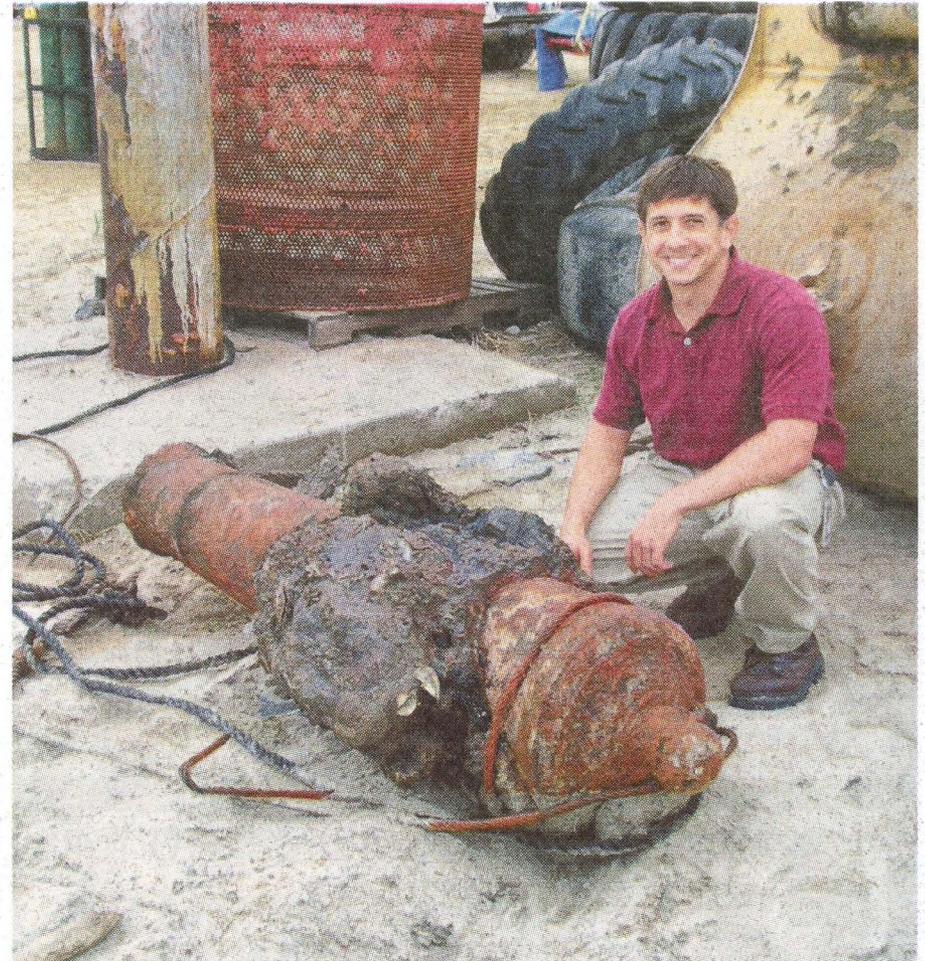
In November 2013, Navy divers working with Corps archaeologists retrieved a 64-square-foot, 5,000-pound section of the ironclad warship to help determine the ship's condition and develop a retrieval strategy.

It won't be easy. The current is swift. "Most (of) the time, visibility is very limited; it's black," said Burt Moore, chief of the dredging system for the Savannah District, who dove as part of the Corps dive team for the Georgia project.

Despite the challenges, it's exciting. "Raising the CSS Georgia is unique," said archaeologist Morgan. "There were no existing drawings or plans. We're bringing up a puzzle." ●

"Most (of) the time, visibility is very limited; it's black."

— Burt Moore, Corps diver for the CSS Georgia project



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Keith Lockwood, environmental scientist with the Norfolk District, poses with a Civil War cannon retrieved from the Lynnhaven Inlet in Virginia.