MARITIME ARCHAEOLOGICAL AND HISTORICAL SOCIETY

MAHSNEWS

VOLUME 33, NO. 2 FALL 2022

Clotilda: The Archaeology of the Last Known Ship to Bring Captives from Africa to America

By James P. Delgado

In May 2022, we completed our third year of field work on the submerged wreck of the schooner *Clotilda*, the last vessel known to have brought captives from Africa to America with the intention to sell them into slavery. The wreck is located in a stretch of the Mobile River that curves around Twelvemile Island, approximately four miles upriver from downtown Mobile, Alabama. *Clotilda* has rested in this exact location since it was scuttled in July 1860, a date which marks the conclusion of its illegal voyage.

The wreck was never "lost," and our work has focused on the forensic, archaeological identification of it as well as documenting the site, while more recently assessing its condition, the environment, and factors influencing its ongoing preservation. All the work has been done with required permits from the U.S. Army Corps of Engineers and under the guidance and management of the Alabama Historical Commission. *Clotilda* is listed in the National Register of Historic Places at a national level of significance. The most recent phase of work was funded by a special appropriation from the Alabama State Legislature. At every step, the project has proceeded in close coordination and regular communication with the community of Africatown, including full sharing of plans and progress. Africatown, located just north of Mobile, was founded after 1865 by a group of *Clotilda* captives, and a portion of the current population consists of direct descendants of *Clotilda* survivors.

Archaeologists D. Marx, A. DeCaro, and K. Lent document one of the loose structural elements of Clotilda *in 2019. (Alabama Historical Commission/SEARCH, Inc.).*

Basic aspects of *Clotilda* are documented in the historic record. Descriptions of contemporary government documents of registry, records of enrollment, ship's registers published by and on behalf of *Clotilda's* insurance companies, and contemporary newspaper accounts of both the ship's construction and

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Notes from the Prez – Steven Anthony

The MAHS Board has always made safety our first priority. In view of the conflicting opinions about the status of Covid and based on a recent report of the Covid outbreak on the Bahamas Aggressor dive excursion this summer, MAHS has postponed all congregative activities including our Field School until June 2023. We are hopeful that the pandemic is fully behind us by June and we can get safely back in the water then. For all those who have been waiting to participate in the MAHS Field School, check our webpage and MAHSmail for updates as we draw closer to that date.

Congratulations to those of you who have been diving safely during the pandemic. But for those of us who haven't, now is the time to get ready to start diving again. First, if you haven't done so yet, you may register for the 2023 Introductory Course in Underwater Archaeology, which begins in late January. The course will be conducted by Zoom and offers an important overview of the science and techniques of underwater archaeology. Successful completion of the course qualifies one to participate in our Field School. See www.MAHSnet.org for registration information and a class schedule.

Second, if you haven't been physically active during the pandemic, now is the time to start getting back in shape. Diving, especially from a boat during bad weather, can be a rigorous activity. So, start your personal workouts at home and get back into the gym and pool as soon as it is safe to do so. You may consult the AAUS standards to get helpful targets for the kinds of workouts that strengthen your diving skills.

Third, consider advancing your dive training over the winter months. Dive certification agencies have developed Covid safe alternatives for their dive classes. A course in CPR and First Aid offers important skills that one can obtain before our next field school.

Finally, if you haven't been diving during the pandemic, this is a good time to start planning for when you will get back in the water again to refresh your diving skills. When it is safe to do so, consider taking a refresher class from one of the dive certification agencies. And don't forget to update your dive gear. This is a good opportunity to get your tanks recertified, your BCD inspected, regulators serviced, and complete many other basic maintenance steps during the winter months.

This Summer was a busy time for MAHS. The 2022 class exams were graded, and I am pleased to report that Earl Glock, our Dive Safety Officer, processed 16 applications for the PADI Distinctive Specialty Card associated with the course. He also finished processing

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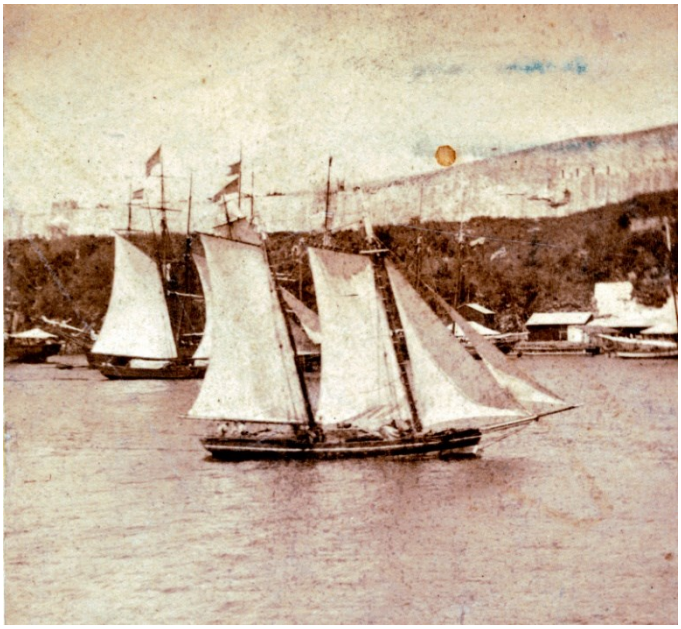
MAHSNEWS will consider articles and notices for publication which enhance public awareness and appreciation of maritime history, archaeology, and heritage preservation.

launch provide insight into the vessel itself. A significant primary source of material is the account by the captain, William Foster, of the slave-trading voyage of 1860, which details, among other things, modifications made to *Clotilda* in anticipation of the journey.

In 1855, the *Mobile Daily Advertiser* noted that the just-launched *Clotilda* was being rigged and outfitted and that "She is light and commodious, draws thirty inches forward and forty-two inches aft…her model is of that graceful turn which confers assurance that she will prove a fast sailer," and that the "vessel in model and fastening does great credit to her builder, and afford another evidence of the capacity of our city for successful and economical shipbuilding" (*Mobile Daily Register*, October 17, 1855:3).



A panel from a stereo image of vessels in Havana Harbor in 1860. The schooner in the foreground, a two-master, offers a close comparison to what Clotilda *would have looked like coming into Havana harbor five years earlier. (Library of Congress, George N. Bernard, photographer. https://www loc.gov/item/2017650350/).*

This wording is significant and focuses on *Clotilda*'s form being specifically designed to be a fast ship, an ideal characteristic for a vessel intended for offshore trade beyond local waters. This suggests that during the construction of the vessel, the owners were anticipating long open ocean voyages in the craft. A reminiscent account of *Clotilda*'s final voyage noted "she was built with a view to speed and was claimed by her builder to be the fastest vessel ever built in Gulf waters" (*Pittsburgh Daily Post*, April 15, 1894:1).

The only surviving certificate of enrollment and registry for *Clotilda*, filed with the U.S. Government at the time of its original registry in the Port of Mobile on November 19, 1855, records the vessel specifications as an 86-foot length between perpendiculars (between the bow and sternposts), a maximum beam (width) of 23 feet, a depth of hold measuring 6 feet 11-inches, and admeasurement of a registered gross tonnage of 120 81/95, which was a formula based estimate (for taxation) of the schooner's cargo capacity. The certificate also noted a single deck, two masts, rigged as a schooner, with a square stern, a billet head, and no galleries (US Customs Service Coasting Licenses 1855: No. 24).

The terms and measurements used in the document offer a precise description of the form and outfit of *Clotilda*. The ship's lines, or body, were built with a full-formed, deep hull that was simple in decoration; the stern had a simple squared or straight transom, without galleries, which were enclosed spaces at the stern common on some larger wooden sailing ships of the first half of the nineteenth century. The bow was ornamented only by a plain carved decorative timber cap, not a figurehead. The masts were rigged with gaffs and booms in a fore-and-aft configuration either with topsails or without topsails, the latter in what sailors called a "bald-headed" rig.

Additional details from the New York Marine Register, a published listing of vessels insured by New York underwriters, confirms the schooner's dimensions; this verifies that the schooner had been built to standards published by the underwriters and had undergone inspection that showed *Clotilda* had met those standards. The registers also describe *Clotilda* as "full-modeled," with a laden (loaded) draft of 6.5 feet, which along the dimensions of the hull's length, beam, and the depth of the hold, indicates that *Clotilda* was not a typical shallow, flat-bottomed Gulf schooner built to sail in protected waters closer to shore, but was built to work on the open sea. The registers also indicate the schooner had a centerboard and was built of yellow pine and oak fastened with galvanized iron (*American Lloyd's* 1859:306).

The capacity of the hold and *Clotilda*'s reputation as a fast sailer were factors in its selection for an illegal slave-trading voyage to and from the African coast. What may also be the case is that Clotilda was in fact designed and built with the illegal slave trade in mind. Little modification was required for the voyage other than to ensure the protection of the wooden hull from marine borers that would eat the hull on a prolonged ocean voyage, and to add sail (and hence make the schooner faster). Timothy Meaher, Mobile businessman and owner of *Clotilda*, added copper sheathing to the schooner's hull at his shipyard. Adding topsails, and re-rigging the schooner to a brigantine with a square, yard-rigged foremast enhanced the two-masted *Clotilda's* existing fore and aft rig. This did not require altering the hull: the crew merely re-rigged *Clotilda* as a brigantine.

This was a laborious but essentially simple task that could be handled by a ship's crew. Foster, in an 1890s

reminiscence, noted at the end of the voyage that, to help disguise *Clotilda's* transatlantic passage, the crew down-rigged the schooner off the Florida Keys in the Dry Tortugas and "disguised" the vessel.

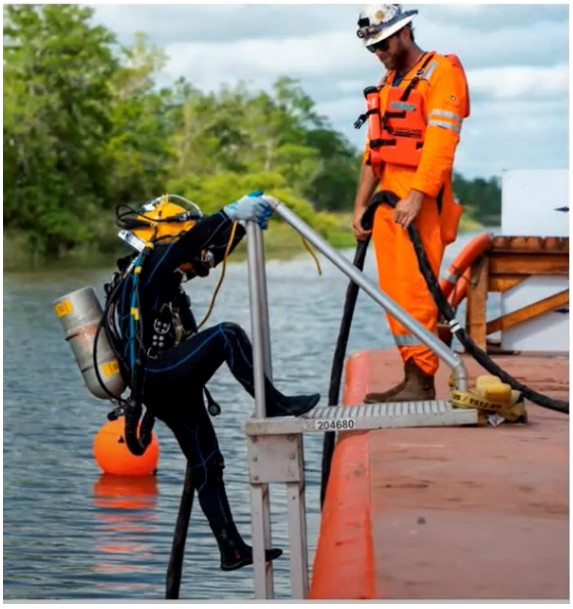
The forward portion of Clotilda *as it lay exposed on the riverbed; the stern is buried in the mud. Details visible include internal bulkheads. (Alabama Historical Commission/SEARCH, Inc.).*

The only other modification needed for the transatlantic transportation of enslaved people would be in the main hold to confine those held below. Lumber shipped out of Mobile and stacked on the deck of the schooner was used by the ship's carpenter to reconfigure the hold as the means to house and hold the enslaved people brought on board. This was likely a series of wooden "platforms" that the captives, tightly packed together, were forced to lie on for the passage. The space in the hold was small, and the physical remains of *Clotilda*, including this space, are a powerful and terrible archaeological site that speaks to the ordeal of the millions of captives brought not only on this ship but on literally thousands of other slave ships.

At the conclusion of the final voyage, once his crew had departed and the captives had been transferred to the steamboat *Czar* to commence the next leg of their voyage into enslavement, Foster took *Clotilda* up into a connecting bayou and scuttled it. He later stated that "I burned her & sank her in 20 ft of water." As this process was likely done in a haste, *Clotilda* itself was likely not stripped, especially of the incriminating evidence of the illegal slave trading voyage. This suggests that much of the cultural material present on the vessel at the time of scuttling may remain in the wreck today. To support this belief, local oral tradition indicates that at one time, the exposed portions of the wreck (those visible at low water) were actually dynamited to remove some of the copper sheathing on the outer hull. To date, surviving archaeological elements observed at the wreck site include dislodged ship planks, a portion of the centerboard, a segment of bilge pump pipe, and, on one unique plank, tack marking on the wood, clear evidence of where a section of copper sheathing had been pulled from the plank.

Archaeological investigations between 2018-2020 found that the hull, angled up to the bank and partially buried in sediment, is substantially intact. Most and possibly all of the decking of the vessel is missing, the masts and rigging are missing or buried, and some disarticulated timbers and fittings rest on the bank in the shallows surrounding the wreck site, presumably the result of the previously mentioned blasting and salvage attempts of the mid-twentieth century. Key observations to date indicate that *Clotilda* has survived to a level above the original waterline on the port side, and possibly to the same level on the starboard side, with the exposed form of the bow intact. Those features which defined *Clotilda* both for regular trade and that were factors in its selection as a slave ship—a commodious hold, a deep draft, and a hull hydro-dynamically designed to be a fast sailer—have survived. The bulkheads inside the hull for the crew's quarters at the bow, and in the main hold, including the bulkheads that define the area in which the captives were held, have also survived.

The relative intactness of the hull and its entombment in the surrounding mud in near-fresh water has preserved not only the structure but the fine details of the



Hard hat diver entering the water above the wreck site. (*Daniel Fiore, Alabama Historical Commission).*

Conservators work onsite with metal artifacts: upper left, hawse pipe through which the anchor cable passed; upper right, large pulley mounted inside the gun tackle steering mechanism connecting the wheel in the helm to the rudder. (Daniel Fiore, Alabama Historical Commission).

work of the shipwrights; this includes carefully shaped timbers that were closely and carefully fitted, hand-wrought and hand-driven iron fasteners, and the employment of wooden plugs that cover counter-set heads of iron spikes driven to fasten planking to the hull's frames. The grain of the wood on the plugs is oriented to conform to and follow the grain of the planks to which they are fastened.

Conservators worked on site to assess the condition of the wreck, including its metal and wood features. The substantial survival of the hull and its interior fittings along with careful analysis of the structure has confirmed the presence of yellow pine and white oak, and near-pure iron fasteners as noted in the registry notations for *Clotilda*. When the vessel was scuttled, it sank quickly. Because of this, the post-scuttling impacts were essentially minimal. The wreck is a substantial entity representing *Clotilda* as it was built and maintained in its brief five-year career, and the burial of the hull in a dark, fast-moving river's currents make it inaccessible other than through a complete removal of the hull, which did not happen. These factors suggest that much of the copper sheathing, especially on the lower hull, likely remains fastened to the planks.

Our analysis of the wreck site has been as thorough as possible. Nothing found on the wreck was left unexamined, no matter how puzzling. At one point we discovered electrical wiring and three switches inside the hull, screwed into the exposed frames. Research provided an answer to what it was doing there. The style of the hardware dated from 1920s or 30s, and we determined that it had been used for lighting when this stretch of the river was used as a staging area for scrapping vessels left from World War II.

More than just solving a seemingly minor mystery, this discovery served as a reminder that, as we have noted, *Clotilda* was never lost. There were people who knew exactly where it was. We can never say that this vessel was discovered. We did not discover it. Our job has been to confirm its identity through careful and detailed forensic analysis, and to treat it not only as a sensitive archaeological site but as the scene of a crime.

Further excavation of the hold may provide more detail on how the space was utilized. The area was small: it measures 23 feet in length, with sides that follow the curve of the hull from a width of some 18 to 23 feet; from the bottom of the hold to the deck was just under 7 feet in height. The space was unventilated and unlit. The means by which 110 people were held within this space is materially demonstrated by the surviving structure. Under our permit, we excavated two 1-meter square units within the hold area. While no small objects were recovered, we sampled the sediments for indications of site stability as well as for environmental DNA to determine the types of bacteria inhabiting the wood.

Iron drift with a fragment of charred oak from one of the frames of the wreck was a key piece of forensic evidence. (Alabama Historical Commission/ SEARCH, Inc.).

Clotilda's hold is to date the only known surviving space that has essentially been sealed in an archaeological context within a few hours of the end of the slaving voyage without any effort to clean or dispose of evidence of its human cargo. It survives in the twenty-first century because Captain Foster quickly sought to burn and sink it. The integrity of association the *Clotilda* site provides is a unique and horrific archaeological opportunity to enter and to be surrounded by the likely well-preserved forensic evidence of the hold of a slave ship and of that which took place in it during the 45-day voyage from Africa to Mobile.

The wreck of *Clotilda* exists today as a shipwreck site and a component of a larger maritime cultural landscape of vessel abandonment and loss in the Mobile area. The vessel remains are one of only a handful of slave ships located throughout the world which are accessible for archaeological study. To date (2021), *Clotilda* is the only American slave ship located and identified. Its high degree of archaeological integrity suggests that direct physical evidence, both artifactual and forensic, is encapsulated in probable anaerobic conditions in thick mud. As such it represents a unique opportunity to study not only a vessel modified for use as a slave ship, but one deliberately scuttled at the end of its slave trading voyage. In this, *Clotilda* is also an archaeological site with specific and powerful ties to the archaeology of the African Diaspora and the community members of Africatown. An exhibition is planned in the near future at the Africatown Heritage House.

James P. Delgado, Ph.D., RPA, is Senior Vice President, SEARCH, Inc., a cultural resource management firm. He is based in Jacksonville, Florida.

Much of this article is excerpted from the National Register of Historic Places Nomination for Clotilda*, which was authored by Delgado, Kyle Lent, and Michael Brennan, and which led to the successful listing of the wreck at a national level of significance.* ⚓

The Slave Wrecks Project — Transformative Practices in Maritime Archaeology

by Kate McMahon

The global slave trade was a fundamental chapter of history that continues to shape our world. The Slave Wrecks Project (SWP) is an international network of researchers and institutions that builds important bridges based on this shared history. SWP combines collaborative maritime archaeology with training, heritage protection, exhibits, and educational opportunities to build and share new knowledge about the global slave trade and its enduring legacies.

Hosted and co-directed from the Smithsonian National Museum of African American History and Culture (NMAAHC), the network is co-coordinated by The George Washington University in the Department of Anthropology in the Columbian College of Arts and Sciences. The other SWP Global Partners are Diving With a Purpose, Iziko Museums of South Africa, the United States National Park Service, and Institut Fondamental d'Afrique Noire, in Senegal. The broader SWP network also spans a growing list of national, regional, and at-large partnerships with institutions, researchers, and community groups in South Africa, Mozambique, Brazil, Saint Croix, Alabama, and other sites in the United States.

The need for collaborative approaches to maritime archaeology extends beyond scholarship and disciplinary diversity, and proceeds from the recognition that racial slavery and the global slave trade represents a fundamental chapter in world history that continues to shape our world. New kinds of engagements are needed with individuals and communities from a variety of positions and perspectives locally, nationally, and internationally—especially ones that foreground the often untold and unvoiced stories, histories, and perspectives of the enslaved and their descendants—while remaining resonant for all.

Student participants of Slave Wrecks Project Academy learn mapping techniques underwater during a dive off the Island of Gorée, Senegal, October 2022. (Courtesy of Slave Wrecks Project).

A New Model

In 2021, the Slave Wrecks Project began development of a formalized training program, the Slave Wrecks Project Academy (SWP-A). Building on over ten years of training programs in archaeology, conservation and museum studies attached to its ongoing research and fieldwork, SWP-A seeks to cultivate new practitioners of maritime archaeology through targeted curriculum and training, centered on students from Africa and people of African descent. SWP-A will develop an international network of archaeologists engaged in maritime archaeology of the slave trade, who engage deeply with decolonized practices and

Academy students learn underwater mapping techniques in a classroom in Dakar, Senegal. (Courtesy of Slave Wrecks Project).

paradigms, while simultaneously generating cross-cultural and interdisciplinary learning across Africa and the African diaspora.

Traditional graduate education is inaccessible to many students across the African diaspora, and few maritime archaeology programs exist in universities outside of North America and Europe. SWP-A will galvanize a new generation of maritime archaeologists who have historically been underrepresented in the field, training them to approach the history of global slavery through interdisciplinary methods. SWP-A will also encourage the growth of deep global collaborations between universities, cultural institutions, local communities, and broad publics through its unique approach of both formal training and community engagement and learning. Students receive a three-part practical and theoretical curriculum of dive training, maritime archaeology, and historical and cultural study.

In late September 2022, the SWP launched SWP-A and welcomed the first cohort of students through a field-and-classroom based training opportunity in and around Dakar, Senegal. This first cohort of 11 students came from Senegal, Côte d'Ivoire, Benin, and Haiti, and had a variety of backgrounds and skill levels in diving and archaeology. Students spent the first portion of the field season advancing their diving skills, and for some learning diving and swimming in tandem. Led in partnership with Dr. Ibrahima Thiaw of Cheikh Anta Diop University (Dakar), Marc-André Bernier of Parks-Canada, and Gabrielle Miller of the Center for the Study of Global Slavery at the Smithsonian National Museum of African American History & Culture, students received significant on-the-ground training in Senegal that included underwater archaeology practicums, classroom-based curricula, a week-long workshop titled "Archaeology by and for the Diaspora," and site visits to better understand the connections between maritime history of the slave trade and local communities.

Society for Historical Archaeology Lisbon, 2023

The Slave Wrecks Project is bringing together our global network and scholars of the archaeology, history, and material culture of slavery at the Society for Historical Archaeology Conference in Lisbon from January 4-7, 2023. A series of events will include panels and talks within the SHA conference itself, as well as a public symposium that immediately follows the conference in Lisbon featuring Smithsonian Secretary Lonnie G. Bunch. It will showcase new directions for public institutions to engage and grapple with the history, memory, and legacies of slavery and colonialism in Portugal, across Europe, and throughout the Lusophone world.

Kate McMahon, Ph.D., is an Adjunct Professor of History, Howard University, in Washington, D.C., and a Museum Specialist and Content Coordinator at the Smithsonian National Museum of African American History & Culture.

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Academy students stand together on a pier on the Island of Gorée, October 2022. (Courtesy of Slave Wrecks Project).

14th-Century Wreck on Tallinn's Waterfront

A version of this article originally appeared in The Maritime Executive.

Archaeologists in Tallinn, Estonia recently discovered the wreck of a wooden vessel dating to about 1300 AD, putting it within the timeframe of the famed Hanseatic League.

The 80-foot wreck was found during excavation at a construction site near Tallinn's harbor, buried about five feet below the modern ground surface near what was once the mouth of the Härjapea River. Another buried wreck was discovered along the waterfront in 2015. The remains of that vessel are now on display at Tallinn's Estonian Maritime Museum. Given the previous find, archaeologists were on the lookout at the new construction site for further remains. After excavation, the site will house an office building.

Replica of a Hanseatic cog (file image courtesy of VollwertBIT / CC by SA 2.5).

Though more work will be needed to confirm its origins, the ship may be a Hanseatic cog—a flat-bottomed sailing vessel with a simple sail plan, designed for efficient and economical trading in the Baltic. Its wide, spacious design could accommodate as much as 90 tons of cargo, while its low draft and flat bottom allowed it to sail in shallow water. It was also able to settle on a shallow bottom at low tide for loading and unloading when a quay or jetty was not present.

Priit Lätti, an archaeologist with the Estonian Maritime Museum, told media outlet Live Science that the ship was filled with multiple layers of sand, and was located in an area of the harbor that was once under almost two meters of water. Often changing sand bars were common at the river's mouth. It is possible the vessel went aground on a bar and sank. He further said that initial dendrochronological analyses suggest the wreck may date to the late 13th or early 14th century. The estimate is being increasingly supported as more details are unearthed, but further analysis will be needed to confirm the dating.

The waterlogged sediment in which the wreck lay resulted in a remarkable state of preservation of organic material, from the vessel's timbers to organic artifacts including cordage and leather.

Next steps include the completion of the wreck's excavation followed by careful planning for its removal to a safe location for preservation. The question of funding for the project is not yet settled, archaeologist Mihkel Tammet told local EE News. The clock is ticking, however: the wreck may start to decay if action is not taken soon.

If the vessel is confirmed to be a Hanseatic cog, it would be one of the best-preserved examples ever found.

Northern Europe in the 1400s, showing the extent of the Hanseatic League. (G. Droysens Allgemeiner Historischer Handatlas, 1886 / CC by SA 3.0).

Top, excavation of the vessel's hull in progress; middle, a sample of cordage from the excavation; bottom, various fragments of shoe leather from the excavation. (Photos by Patrik Tamm/ERR).

The only other wreck that would approach its degree of preservation would be the so-called Bremen cog, discovered in 1962 and housed today in Bremerhaven.

The cog was the ship of choice of the Hanseatic League, a confederation of cities and traders who sailed along the coastal regions of present-day Germany. Merchants joined groups called Hanse, or guilds, commercial associations whose vessels sailed in convoys so as to protect their valuable freight. The league's activities stretched from London in the west to the Neva River at St. Petersburg in the east, thus including most of the European coast of the North Sea and the Baltic. The League had a major presence in European trade from about 1200 to 1600, and it was the dominant force in the region for much of the period.

The economic power of the Hanseatic League grew substantially as did their military capacity. The League's ships were typically armed, and they were not hesitant to protect their trade through martial as well as economic means. The confederation even engaged in several wars with sovereign governments, including a successful war with Denmark in 1361-70. The core municipalities of the League—Hamburg, Bremen, and Lübeck—retain the title of "Hanseatic City" to this day.

The original version of this article can be found at https://www.maritime-executive.com/article/archaeologists-discover-14th-century-wreck-on-tallinn-s-waterfront.

Supplementary text is from Städtbund Die Hanse at https://www.hanse.org/en/union-with-a-long-tradition.

More images of the excavation, provided by ERR News, Estonian Public Broadcasting, were included in the article and can be accessed at https://news.err.ee/1608568228/paper-biggest-shipwreck-of-its-kind-unearthed-at-tallinn-construction-site.

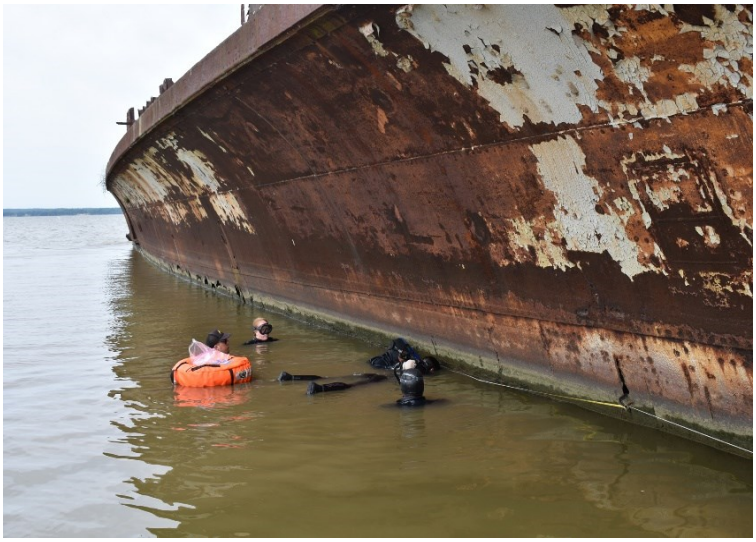
For additional information about cogs see
Cogs, Caravels and Galleons: The Sailing Ship from 1000–1650, edited *by Robert Gardiner and Richard W. Unger. Conway's History of the Ship. London: Conway Maritime Press, 1994.* ⚓

Revisiting the Shipwrecks of Mallows Bay: Archaeological Documentation and Condition Assessments of the Mallows Bay Wrecks

by Allyson Ropp

In 1925, part of the landscape of the Potomac River south of Washington, D.C., changed. During World War I, the U.S. implemented a massive shipbuilding effort to outfit the country for war. The U.S. Shipping Board Emergency Fleet Corporation commissioned a fleet of 800 to 1,000 wooden steamboats to augment the steel fleet and ferry supplies to the front. Between 1917 and 1918, only 140 of the vessels were completed or were at least capable of sailing. While the program officially halted in 1918, the shipbuilding yards contracted for this program completed an additional 104 vessels. The construction ceased in July 1920, with approximately 600 ships in various states of completion and remaining in yards around the country or not yet started.

With over 300 wooden ships tied up and leaking in ports around the country, the U.S. Shipping Board chose to sell the vessels for salvage. Western Marine & Salvage Company, of Alexandria, Virginia, purchased 233 of these vessels. The company used the Potomac River for the salvage effort, initially stripping the ships in Alexandria before moving them to Widewater, Virginia, about 35 miles south of Washington, for final disposal. Due to several fires and the openness of the Widewater anchorage, the company purchased Marlow's Bay, now Mallows Bay, located directly across the river on the Maryland shore, to complete the disposal process. Work in the bay included a repetitive process of stripping and burning. Burnt hulls were then pulled against the shore for sinking. By 1931, when Western Marine & Salvage abandoned the project, there were 169 ships in the bay. This abandonment effectively opened salvage of the vessels to anyone, a situation that continued until 1942 with the U.S. entrance into World War II. Commercial salvage continued in the bay until the war ended in 1945. Since then, the stripped and burned hulls have been abandoned to become part of the environment in Mallows Bay.



Dr. Nathan Richards, MS student Maggie Shostak, and Program in Maritime Studies students scrape biofilm samples off the remains of Accomac *(Meredith Cox/ECU Program in Maritime Studies & Department of Biology).*

Students make a video recording of Aowa *to generate a photogrammetric model (Mark Keusenkothen/ECU Program in Maritime Studies).*

The remains of these vessels represent a significant, albeit failed, economic and military effort by the U.S. Today, they comprise one of the largest ghost fleets in the Western Hemisphere. As such, in 2019, the National Oceanic and Atmospheric Administration designated an 18-square-mile area of the Potomac River, including the bay, the Mallows Bay-Potomac River National Marine Sanctuary. This sanctuary protects and preserves the Emergency Fleet Corporation hulls, other non-Emergency Fleet shipwrecks brought to the bay over the years, and the ecosystems that have been altered and supported by the wrecks.

The archaeological sites in the bay and the surrounding area have been understudied. In the 1980 and 1990s, Donald Shomette began identifying and cataloging all the archaeological material within Mallows Bay. Since then, little follow-on work has been undertaken to analyze these shipwrecks and understand their place in the local, regional, and national narratives, as well as their importance to ecological systems.

In the summer of 2022, East Carolina University's Program in Maritime Studies sought to expand the

The remains of Aowa *sitting on the outer line of wrecks in Mallows Bay. Students are working on mapping the wreck site while a group of kayakers passes behind the wreck. (Jeremy Borrelli/ECU Program in Maritime Studies).*

knowledge of the wrecks in Mallows Bay. The Program in Maritime Studies hosts an annual field school to teach master's degree students about archaeological methods in a hands-on environment in the field. The field school at Mallows Bay was planned and run by Dr. Nathan Richards, Dr. Jason Raupp, and Jeremy Borrelli of the Program in Maritime Studies, and Dr. Erin Field of the Department of Biology. The field school supported the PhD research of the author, and a master's degree student in Biology, Maggie Shostak. The study was conducted with the assistance of the Maryland Historical Trust (Dr. Susan Langley), NOAA's Maritime Heritage Program (Joseph Hoyt and Maddie Roth), and Mallows Bay-Potomac River National Marine Sanctuary (Sammy Orlando, Tane Casserley, and Will Sassorossi).

The team set out to document three shipwrecks in the bay: *Accomac*, *Aowa*, and *Bayou Teche*. In addition to the archaeological team, researchers from the ECU Department of Biology and the Department of Coastal Studies participated in the fieldwork to collect environmental, biological, and deterioration samples in and around two vessels to answer questions about shipwreck preservation.

The remains of *Accomac* are probably the most visible and prominent feature in the bay, as they tower over the burned hulls nearby. *Accomac* was a steel-hulled ferry completed in 1918 and was not part of the Emergency Fleet. It traversed the North Atlantic before being requisitioned by the U.S. government for World War II. Following the war, it underwent a massive overhaul to become a car ferry for use around the Chesapeake Bay region. When the Chesapeake Bay Bridge-Tunnel was built in 1964, the ship was not as necessary as it had been. It was eventually decommissioned and was towed to Mallows Bay in 1973. Due to its present location in the bay, it is heavily impacted by incoming waves and shifting tides. The team was only able to document the site through photogrammetric means because of the unstable conditions of the corroding structure. The team also collected over 90 samples of wreck biofilm, sediment, and water samples to determine the microbiome of the wreck and its influence on the corrosion of the vessel.

The remains of *Aowa* sit on the outer line of wrecks in Mallows Bay. Before its purchase by Wester Marine & Salvage for scrapping, the vessel made several voyages to South America. Since undergoing salvage and abandonment, *Aowa* has been exposed to the environment, even more so than some of the abandoned vessels on the interior side of the bay. Owing to its exposed location, *Aowa* is struck daily by wind-driven tidal waves and wakes from passing vessels. The ECU team sought to document the vessel's current condition to compare it to its original form and assess its deterioration. The team laid a baseline and recorded the entire length of the vessel in detail. The team also created a profile of the vessel's starboard side and a cross-section. These scaled drawings showed subtle differences between the ship design plans and the constructed vessel. The research team collected microbial samples from the wreck biofilm and surrounding environment to determine if this community has any bearing on site deterioration. Density measurements of the vessel structure supplemented the environmental data. Using a resistograph, the team recorded the wood's resistance against a drill bit, which equates to the softness or hardness of the wood.

Students diligently work using the baseline-offset method to map Bayou Teche*. (Jill Schuler and Lindsay Wentzel/ECU Program in Maritime Studies).*

Collectively, these datasets can provide insights into structural decay. Analysis of the data is ongoing.

Lastly, the team recorded a second EFC-era vessel, *Bayou Teche*. *Bayou Teche* was constructed in 1918 in Madisonville, Louisiana, and was launched on July 4 that year as part of a nationwide launch of 94 wooden steamboats. Unlike *Aowa*, *Bayou Teche* sits at the bay's north end behind lines of other abandoned vessels and is sheltered from most boat wake and wind-driven waves. Though burned and salvaged, this location has allowed the abandoned vessel to settle into the sediment. The team documented the site in a similar method to *Aowa* by laying a baseline and recording the full extent of the exposed structure. Supported by low tides and shallower water, the team was able to document some unique features of this site not visible on *Aowa*, including the rudder post, the keel shoe, and breast hooks.

MA student Raymond Phipps works on the site plan for Aowa *(Allyson Ropp/ECU Integrated Coastal Science Program).*

The work conducted during the field school successfully created site plans, photogrammetric models, and environmental datasets to help understand the current conditions of these three sites and provide starting points for future research into the preservation and stability of the wrecks in Mallows Bay.

The research team is analyzing the current data and plans to conduct future work on the ongoing condition of the wrecks. So, be on the lookout in the coming years for additional research reports on the work from Mallows Bay.

Allyson Ropp is Historic Preservation Archaeology Specialist with the State of North Carolina. She holds a Master's Degree in Maritime Studies from East Carolina University (ECU), where her research focused on the maritime landscape of piracy in NC.

For further reading:

Charles County

2022 A Paddler's Guide to Mallows Bay: A Self Guided Tour of the Ghost Fleet of the Potomac River. Charles County Department of Parks and Recreation: La Plata, MD.

Office of National Marine Sanctuaries (NOAA)

2019 Mallows Bay-Potomac River National Marine Sanctuary Designation Final Environmental Impact Statement and Final Management Plan. U.S. Department of Commerce, National Oceanic and Atmospheric Administration, Office of National Marine Sanctuaries: Silver Spring, MD.

Shomette, Donald G.

1994 The Shipwrecks of Mallows Bay: An Historic Overview. Mallows Bay, Maryland Submerged Cultural Resources Survey. Prepared for the Maryland Historical Trust, Crownsville, MD, and The St. Clements Island-Potomac River Museum, Colton Point, MD.

1996 Ghost Fleet of Mallows Bay and Other Tales of the Lost Chesapeake. Tidewater Publishers: Centerville, MD.

1998 The Shipwrecks of Mallows Bay: Inventory and Assessment. The Mallows Bay Submerged Cultural Resources Survey. Prepared for the Maryland Historical Trust, Crownsville, MD.

U.S. Department of Labor

1921 Ship's Manifest, 1921. The Statue of Liberty – Ellis Island Foundation, Inc. https://heritage.statueofliberty.org/ship-details/czo0OiJBb3dhIjs=/czoxMDoiMTkyMS0wMy0wMiI7/czo4OiJtYW5pZmVzdCI7/czowOiIiOw==/czo1OiIzMDgyNCI7#passengerListAnchor. Accessed 18 February 2022. ⚓

Batavia Shipwreck Timbers: Dendrochronological Analysis and Implications for 17th-Century Trade

This article originated as a research paper in PLoS ONE *and a summary article in* The Maritime Executive.

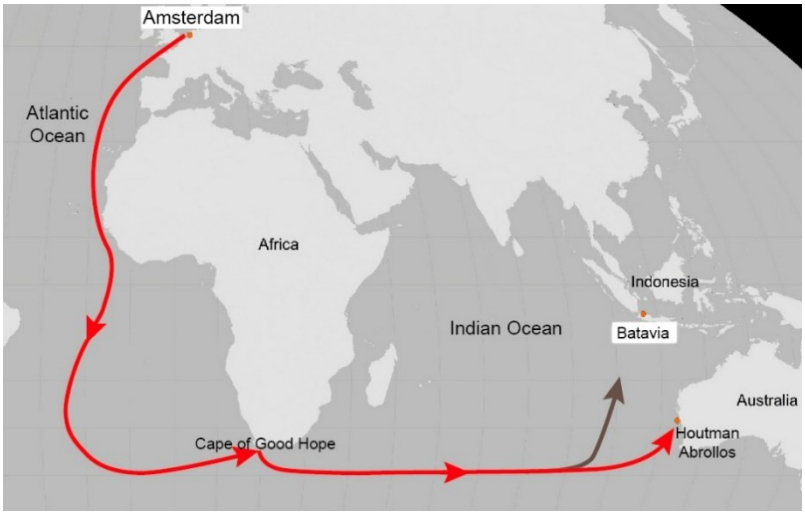
The tale of the Dutch East Indiaman, *Batavia*, is well-known, particularly the account of the ship's wrecking and the horrific aftermath of that event. The story has been documented in numerous books, both historical and archaeological, by authors including Hugh Edwards, Jeremy Green, Philippe Godard, and Mike Dash.

Recent research has provided additional information about the origin of the vessel. Extensive dendrochronological analysis is revealing not only the age of individual timbers comprising the ship but also their provenance. The latter has implications for commerce during a period in which European trade networks were developing, with the Dutch East India Company (VOC) at the forefront. The VOC (from the Dutch Verenigde Oostindische Compagnie), was a private company granted trade monopoly in East Asia by the Dutch government. Considered by some as the world's first international corporation, the VOC held the ability to establish colonies, conclude treaties, maintain armed forces, and wage war.

Batavia *as illustrated by Ross Shardlow. The white outline on the lower right indicates the section of the port-side and transom raised from the wreck site. (https://doi.org/10.1371/journal.pone.0259391).*

The science behind the recent research, dendrochronology, is the process of dating using the pattern of tree growth that can be determined from the annual rings left by variations in seasonal weather conditions. More commonly known as tree-ring dating, the analysis these days goes well beyond merely providing dates. In one of the latest studies, for example, dating and the determination of wood provenance confirmed the identity of a 19th-century whaler out of Rhode Island that had wrecked on the coast of Patagonia in 1859.

In 2020, *MAHSNews* reviewed a study of dendrochronological research, *Tree Story: The History of the World Written in Rings*, by Valerie Trouet (published in 2020 by Johns Hopkins University Press). Trouet is a dendroclimatologist, studying climate reconstruction based on tree ring analysis. Her book documents the full range of analyses undertaken by dendrochronology, including research in archaeology and historical economics and sociology.



The route sailed from the Netherlands to the wreckage site on Morning Reef off Beacon Island in the Houtman Abrolhos Archipelago. (https://doi.org/10.1371/journal.pone.0259391.q001).

The recent study of the *Batavia* shipwreck was conducted by Wendy van Duivenvoorde, a Dutch researcher based at Flinders University, in Adelaide, Australia, in collaboration with Aoife Daly, an archaeologist at the University of Copenhagen, and Marta Domínguez-Delmás, a dendrochronological researcher at the University of Amsterdam. The research was reported in a *PLoS One* article in 2021.

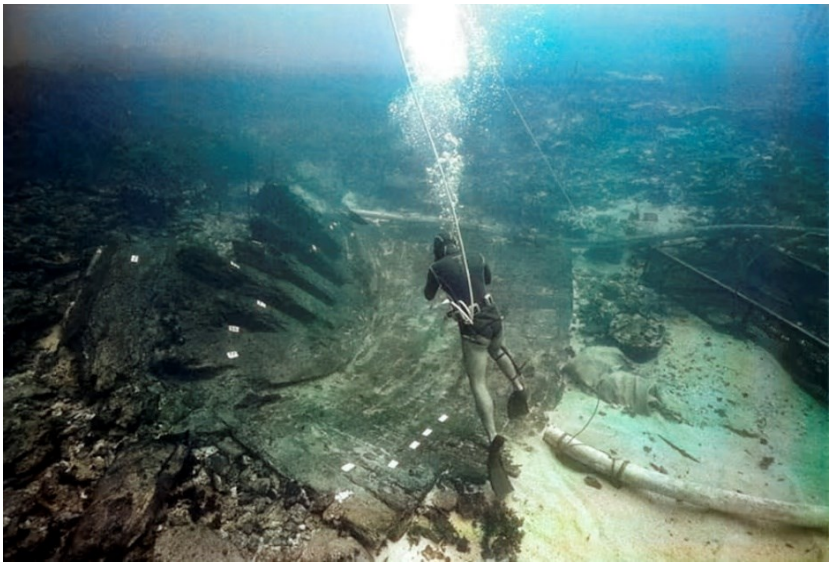
In 1629, the newly built flagship of the VOC, *Batavia*, en route to the capital of the Dutch East Indies of the same name, Batavia, wrecked on the Houtman Abrolhos islands off the west coast of Australia. Most of the 341 passengers survived, but many were then killed by the company official left in charge when the captain sailed on to Batavia for help. The murders were committed in an attempt to cover a planned mutiny by the official. Only 122 of

the original passengers eventually arrived in Batavia.

The wreck was discovered in the early 1960s. Formal excavation began in 1972 by researchers from the Western Australian Museum. The Museum describes the work as one of their largest and most ambitious maritime archaeological projects. In four seasons of fieldwork, the stern section of the ship was completely excavated, leaving a portion of the bow area of the site unexcavated for study at a future date.

Batavia had never undergone repairs or refitting, and so all its timbers were from the ship's original construction. Essentially a brand-new ship when it sank, *Batavia*'s remains provide an excellent resource for studying state-of-the-art 17th-century shipbuilding. The surviving timbers, currently on display at the Western Australian Shipwrecks Museum in Fremantle, were from the lower port stern and transom and included hull strakes, frames, and a gun port with lid.

Taking wood samples for dendrochronological analysis can be an exacting process, one made more complicated underwater. Waterlogged wood is often soft and mushy, so extracting samples may require cutting out large sections to access different elements of the timbers. In the present case, samples were taken from dry, conserved wood from the museum collection. The sample consisted of a total of 101 ship timbers,



Batavia *after removal of the frames and inner hull timbers, during the third excavation season. The diver photographing the hull planking and transom timbers is excavation leader Dr. Jeremy Green. (Patrick E. Baker/Western Australian Museum.)*

including 98 framing elements and hull planks of deciduous oak (*Quercus* subg. *Quercus*) and four sacrificial planks of pine (likely *Pinus* sylvestris). The cores were returned after study and remain in the collection of the Western Australian Museum.

None of the samples contained sapwood, the outer living layer of the tree that indicates the last season the tree was alive, and so dates were bracketed. *Post quem* dates were estimated for the felling of the trees. The outermost heartwood ring of the sampled hull planks dates to 1616. Accounting for the missing sapwood (nine rings for Baltic oak), it was estimated the trees were felled in 1625 or later. *Ante quem* dates were determined from known construction years (1626–1628), based on VOC archives. The dating suggested that the timbers had been processed shortly after felling of the trees, which was typical practice since still-green logs would be easier to cut into smaller sections and planks that could be bent to shape during the ship's construction.

Cross dating was done in a three-step approach, beginning with comparison of individual samples to identify timbers potentially cut from single trees. These timbers were averaged into groups or series representing individual trees that grew under similar conditions and thus were likely to have been from the same geographic area. The series were compared with regional reference chronologies from central and northern Europe to confirm dates and provenances.

In terms of provenance results, three main groups and one smaller group of timbers displaying high similarity were identified. The three main groups correspond to diverse regions: south-eastern Baltic (Baltic Group); northern Germany (Lübeck Group); and north-western Germany (Lower Saxony Group). The highest correlations appeared with reference chronologies from the southern and eastern Baltic region. All the timbers included in this group were planks (inner and outer hull planks below the waterline, ceiling planks, and transom planks). Two small timbers forming a cleat at one of the transom knees also belonged to the Baltic timber group.

The Lübeck Group consisted of five timbers, all inner hull planks above the waterline, except for one small segment used to complete the gunport lid.

The Lower Saxony Group was divided into two sub-groups. Lower Saxony Group I consisted of 13 timbers representing 11 trees, with the best geographical match being a chronology representing the historical area of Twente/Westphalia, in the eastern Netherlands and north-western Germany. Most timbers in this group were frames, positioned throughout the reassembled ship remains, but others were used as transom and hull planking above the ship's double planked bottom. Two short fragments of one timber served to complete the aforementioned gunport lid.

Lastly, four timbers from futtocks in *Batavia*'s framing structure were assigned to Lower Saxony Group II. This

Left, ship's hull on display at the Western Australian Shipwrecks Museum in Fremantle (P.E. Baker, Western Australian Museum); right, Marta Domínguez-Delmás and Aoife Daly extracting a sample from the hull with a dry-wood borer driven by a power-drill. (Wendy van Duivenvoorde, Flinders University).

group fell within a slightly earlier and tighter date, again associated with the Twente/Westphalia area.

One frame timber had a different provenance than the rest of the framing timbers from the *Batavia* hull, matching best with chronologies derived from timbers of two Swedish shipwrecks: the third-rate line ship *Sceptre* (1615); and the warship *Vasa* (1628). The *Batavia* frame timber thus likely originated from a forest in eastern Sweden.

Different tree-growth rates were apparent in the samples. Generally, trees growing in a more open landscape do not need to compete for light and can grow relatively quickly in girth, producing wide annual rings. Trees in a dense forest compete with adjacent trees and tend to grow more slowly, producing narrower rings. For most of the dated samples from *Batavia*, tree growth rates could be estimated between 0.75 and 1.75 mm in girth per year. The Baltic sourced trees used for plank showed roughly the same growth rates as the Lower Saxony timbers of the frames. The similar growth rates implied that the trees were at least 100 to 200 years old when felled. Undated framing elements appeared to represent younger trees with faster growth.

Baltic timber was especially sought after. Trees from the region had exceptionally straight trunks with fine growth rings, making the wood easy to work and very stable. It was prized by artists, who used it for panels on which to paint. Shipbuilders valued the strength and stability of the wood when building ships strong enough to endure repeated return voyages to southeast Asia.

In contrast, the timber for *Batavia*'s framing elements came predominantly from the forests of Lower Saxony (northwest Germany). The frames utilized the strong properties of these oaks' curved wood fibers. As it was sourced close to home, this timber may have been cheaper and easier to acquire than Baltic oak.

Cross section of oak hull plank from Batavia showing its rings. This sample was extracted from a loose hull plank in 2007. (Patrick E. Baker/Western Australian Museum).

The Dutch lacked domestic timber resources to supply their active shipbuilding industry. The archives of the VOC provide no detailed information as to where its shipyards bought timber at the time of *Batavia's* construction. While the company kept detailed records from the mid-17th century onwards, hardly any from the early 1600s have survived. Some of that early information is thus preserved in the results of dendrochronological research.

In the conclusion of the *PLoS One* article, the researchers state that *Batavia* epitomized VOC shipbuilding. "In the 17th century, the VOC grew to become the first multinational trading enterprise, prompting the rise of the stock market and modern capitalism." Oak (*Quercus* sp.) was the preferred material for shipbuilding in northern and western Europe, and maritime nations struggled to ensure sufficient supplies to meet their needs and sustain their ever-growing mercantile fleets and networks.

The current dendrochronological study demonstrates that the VOC successfully maintained critical timber supplies in the face of shortages in the early 17th century by diversifying its timber sources geographically, allocating source regions to specific timber products, and practicing skillful woodworking craftmanship by removing sapwood from all timber elements. "These strategies, combined with an innovative hull design and the use of wind-powered sawmills, allowed the Dutch to produce unprecedented numbers of ocean-going ships for long-distance voyaging and interregional trade in Asia, proving key to their success in 17th-century world trade."

The original research paper on which this article is based was published in PLoS ONE*: https://doi.org/10.1371/journal.pone.02593).*

Photos by Baker and van Duivenvoorde are used by permission.

A summary article in The Maritime Executive *can be found at https://www.maritime-executive.com/editorials/tree-rings-reveal-the-secrets-of-dutch-shipping-in-the-east-indies.*

For further reading:

Edwards, H. *Islands of Angry Ghosts*. United States, Morrow, New York. 1966.

Green, J. *The loss of the Verenigde Oostindische Compagnie retourschip* Batavia*, Western Australia 1629: An excavation report and catalogue of artefacts*. BAR International Series 489. 1989.

Green, J. and A. Paterson (eds). *Shipwrecks of the Roaring Forties: Researching Some of Australia's Earliest Shipwrecks.* UWA Press, Australia, Perth. 2021.

Godard, P. *The First and Last Voyage of the* Batavia. Abrolhos Publishing, Perth. 1993.

Dash, M. B*atavia's Graveyard: The True Story of the Mad Heretic Who Led History's Bloodiest Mutiny*. Crown Publisher, New York. 2001.

Wendy van Duivenvoorde. *Dutch East India Company Shipbuilding: The Archaeological Study of Batavia and Other Seventeenth-Century VOC Ships*. Texas A & M University Press. 2015.

I.A.Mundo, C.Murray, M.Grosso, M.P.Rao, E.R.Cook, and R.Villalba. Dendrochronological dating and provenance determination of a 19th century whaler in Patagonia (Puerto Madryn, Argentina). *Dendrochronologia* 74. 2022. ⚓

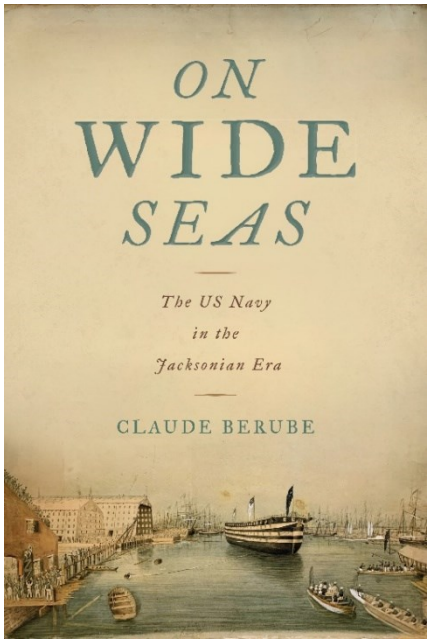
BOOK REVIEW

On Wide Seas: The US Navy in the Jacksonian Era

by Claude Berube (University of Alabama Press 2021)

reviewed by Dennis Knepper

The 1830s, a period in United States history moored between the War of 1812 and the Civil War, was witness to a major and ongoing transition in commercial and naval technology in which the dominance of sailing ships was rapidly waning while steam-powered vessels became more widely established. During most of that decade, a brash backwoodsman from North Carolina and hero of the Battle of New Orleans, Andrew Jackson, was president of the country. Always a controversial and contradictory figure, Jackson was described by his first biographer, James Parton in 1860, as a democratic autocrat, an urbane savage, and an atrocious saint. Among Jackson's achievements, however, and one often not fully acknowledged in histories of his time in office, was shepherding the fledgling United States Navy from a minor military force to a modern navy. A new historical assessment of the period, *On Wide Seas: The US Navy in the Jacksonian Era*, by Claude Berube, focuses on this effort, detailing the modernization of the Navy in the midst of the global technological transition on the seas.



MAHSNEWS previously reviewed William Dudley's work on the development of the U.S. Navy during the era of the War of 1812, its transformation from a small collection of ships and miscellaneous boats to the beginnings of an organized naval force. Berube's book examines the subsequent period of development, arguing that this was the span during which the Navy became a modern force, and that Jackson's presidency was the critical stretch. As characterized on the cover flap of the book, Jackson moved the Navy from "an antiquated arm of the nation's military infrastructure to a separate, integrated force."

Berube sets the stage for this transition by describing the state of the country and the armed forces in the years following the end of the War of 1812. He explains in some detail the status of the Navy during the period—where it stood and how it got there. Naval culture at that time, he observes, was more democratic and enlightened than that of the Army, whose focus was on conquering the continent, as part of the doctrine of manifest destiny. The Navy, he notes, "better reflected the commercial and enlightened side of the country's identity." The Army operated as a constabulary force, while the Navy displayed a different culture, more outward facing. It tended toward a global focus and served to protect commerce; unlike the Army, however, it was unable to undertake large engagements, being suited only for raids and punitive actions.

Berube states up front, in his preface, that he is not a great admirer of Jackson, admitting to "a somewhat jaundiced view of Jackson's behavior." But he concedes that Jackson was a complex figure which makes him "a perennially compelling subject." As the young nation's seventh president, Jackson is credited with recognizing the need to develop a powerful navy and devising a strategy for doing so, in a plan that Berube characterizes as "clear, concise."

Jackson did not need to create a naval force from scratch, Berube observes. He did not inherit a young force that would have required a great deal of his time and attention. The Navy was already established and growing quickly. It was an institution that he was able to manage by means of his natural leadership approach, a mix of instinct, pragmatism, and decisiveness. The author refers to Jackson's role in the Navy's development as paternal, noting that he recognized two main needs: accountability and guidance.

In the first instance, fiscal responsibility was required from the Naval administration, and a major step in this direction came with transferring the office of accountant of the Navy from the Department of the Navy to the Treasury to avoid conflicts of interest or undue pressure from the Navy Secretary. Jackson similarly expected officers and sailors to be accountable "through adherence to regulations and…good order and discipline." In the latter case, he personally reviewed one-quarter of the court martial cases during the period. Contrary to his reputation as a martinet with a fiery and seemingly reckless temper, he overturned or lessened the punishment in a third of those cases, in a mode more consonant with his image as a populist leader who stood up for the common man, "thereby establishing himself as a firm but compassionate father figure.

The guidance Jackson provided the growing Navy, Berube notes, involved support for promotion of international trade agreements to bolster the economic standing of the still young nation. He established a global strategy for crisis response, deterrence, and protection of expanding commerce, and he exhibited a practical and judicious use of force when necessary.

Although not explicitly stated in the text, the book's title, *On Wide Seas*, alludes to the expanding world of commerce in the early 19th century and the Navy's response to the changes. For the U.S. to become part of the new global economic order, the role of the Navy needed an external focus to provide both opportunities and protection for world-wide trade. As Berube notes, the Army was both a conquering force in the westward expansion of the nation and, in effect, a law enforcement agency that maintained control over newly settled areas. In these roles it was constrained geographically. The Navy tended to assume a different function, "serv[ing] to protect commerce when able and to carry out minor punitive actions as needed." It was, thus, "unconstrained by the opportunities the oceans presented."

In discussing the evolving culture of the Navy, Berube notes that an intellectual awakening was underway among naval officers by the 1830s. They exchanged views on wide-ranging issues in letters, books, periodicals, and newspaper articles. The subject matter was wide ranging, from strategic planning in the face of a growing variety of global challenges, to the difficulties in advancement within the force and other matters of seniority and rank. He even notes a lively debate at the time on the merits of creating the rank of admiral, although Congress did not finally authorize the rank until the 1860s.

Jackson's approach to government has been characterized as democratic and laisse-faire, even as he expanded the power of the executive branch over that of the states. He did not, however, attempt to impose on the developing Navy the more rigid authority structure to which he was accustomed in the Army. Specifically, he did not discourage the intellectual freedom being exercised there.

Education played a key role in the professional growth of the officer class. Naval administrators recognized, for example, that shore-based schools for midshipmen prior to their deployments taught skills more effectively than did shipboard schoolmasters or on-the-job training. The Naval Lyceum was created under Jackson's watch in 1833 and became "a crucible for naval reformers that provided legitimacy through a permanent, professional organization that could advance new concepts." The Lyceum's development was largely driven by Commodore Matthew Perry and like-thinking officers. Both a physical repository and a theoretical concept, it was a library filled with works on naval history and strategic theory as well as a meeting place for discussion and interchange of ideas. In the words of the *Naval Magazine* in 1836, its purpose was "to elevate and adorn the character of our Navy [by providing]

professional and general information…to stimulate the members of the profession."

In terms of technology and hardware, Jackson continued the physical expansion of the Navy begun by his predecessor, John Quincy Adams. He began by instituting a program of repair and upgrading of existing warships. Understanding the value of small vessels and of infrastructure, he authorized the building of sloops and schooners, along with construction of dry docks and several new Navy Yards. While few new frigates were built during the period, Jackson did authorize construction of one of the largest existing ships of the line at that time, USS *Pennsylvania*. The three-deck, 120-gun ship was built as much for the prestige that it brought the nation as for the actual naval power it could meaningfully contribute.

And importantly, Jackson endorsed the advancement of steam technology. In this he was influenced by engineer John Stevens, a champion of steam vessels in naval operations. Jackson began his presidency authorizing construction and use of three steamboats for riverine operations during the Second Seminole War. By the end of his term the Navy was building steam-powered frigates.

On Wide Seas is based on the author's doctoral research on the Navy during Jackson's presidency. Berube is the author of seven books and more than 45 articles on a wide range of naval subjects. He has served as an analyst at the Office of Naval Intelligence, a national security fellow in the U.S. Senate, and a Maritime Security Studies Fellow at The Heritage Foundation. He has been a defense contractor for Naval Sea Systems Command and the Office of Naval Research and has taught as both a military officer and civilian at the United States Naval Academy.

The book was thoroughly researched, the author noting that he read through 16,000 pages derived from more than 300 court martial records that reveal much about naval society, life aboard ships, interactions with other navies, and the character of commanders and common seamen.

Berube's writing style is assured and clear, with abundant information about the many historical players that are part of the story. He does occasionally seem to lose the explicit connection between Jackson and the events or persons he discusses, however, spending several pages discussing Matthew Perry and the development of the Lyceum, for example, without mention of Jackson's role other than implying that he did not hinder its development.

Published by the University of Alabama Press, *On Wide Seas* is well designed and clearly printed. Illustrations consist mostly of portraits of historical figures, a few period paintings of vessels or significant historical events, and several graphs, all sharply reproduced in grayscale. The paginated text runs to 179 pages, followed by 43 pages of detailed notes, a separate bibliography, and a 10-page index.

On Wide Seas is a broadly researched book that provides extensive detail about a critical phase in the development of the U.S. Navy and the president who shepherded its development during the period. ⚓

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continued from page 2

the diplomas, which have now been mailed.

This summer MAHS also completed the redevelopment of our video course. Each of the nine classes of the Introductory Course in Underwater Archaeology has been converted to video to form an asynchronous online course titled *Diving Into History*, *An Introductory Course in Underwater Archaeology*. This online course will replace the MAHS DVD series and will update and improve our public education and outreach efforts. Anyone unable to attend our live Zoom classes on Tuesday nights will be able to access the *Diving Into History* course on their own schedule. This will open our classes to students in any time zone in the world. We look forward to conducting this new offering for the first time in 2023.

Jim Smailes, the MAHS Secretary/Treasurer, plans to attend the SHA conference in Lisbon, Spain, in January 2023. I will be attending the Zoom ACUA board meetings that are scheduled to commence in December this year.

As life begins to return to pre-pandemic normal, MAHS looks forward to the return of our former activities and, most importantly, to getting back in the water to explore and investigate historic shipwrecks. As the old saying goes "There are so many shipwrecks and so little time."

I can't wait to get going again. diving again. Just waiting to get the OK sign!

See you on the water,

Steven Anthony

MARITIME ARCHAEOLOGICAL AND HISTORICAL SOCIETY

Statement of Ethics

The Maritime Archaeological and Historical Society is organized for the purpose of enhancing public awareness and appreciation of the significance of submerged cultural resources and the science of maritime archaeology. In pursuit of this mandate, members may come into contact with unique information and cultural material associated with terrestrial and underwater sites containing evidence of the history of humankind. To protect these sites from destruction by commercial salvors and amateur souvenir hunters, the Society seeks to encourage its members to abide by the highest ethical standards. Therefore, as a condition of membership and pursuant to Article 2, Section 1 (A) of the bylaws, the undersigned executes this statement of ethics acknowledging adherence to the standards and policies of the Society, and further agrees as follows:

1. To regard all archaeological sites, artifacts, and related information as potentially significant resources in accordance with federal, state, and international law and the principles and standards of contemporary archaeological science.
2. To maintain the confidentiality of the location of archaeological sites.
3. To excavate or otherwise disturb an archaeological site solely for the purpose of scientific research conducted under the supervision of a qualified archaeologist operating in accordance with the rules and regulations of federal or foreign governments. Artifacts shall not be removed until their context and provenience have been recorded and only when the artifact and related data have been designated for research, public display or otherwise for the common good.
4. To conduct oneself in a manner that protects the ethical integrity of the member, the archaeological site and the Society and prevents involvement in criminal violations of applicable vandalism statutes.
5. To observe these standards and aid in securing observance of these standards by fellow members and non-members.
6. To recognize that any member who violates the standards and policies of the Society shall be subject to sanctions and possible expulsion in accordance with Article 2, Section 4 of the bylaws.

Signature _____ Date

MARITIME ARCHAEOLOGICAL AND HISTORICAL SOCIETY
PO Box 44382, L'Enfant Plaza, Washington, D.C. 20026
Application for Membership

Membership in the Maritime Archaeological and Historical Society is open to all persons interested in maritime history or archaeology whether or not they are divers. Members of MAHS have first preference for enrollment in all courses and other activities and projects of the Society. To join MAHS, please sign the Standards of Ethics above and send it to MAHS along with your check and this application form. You may also submit dues via our website at http://www.mahsnet.org/membership.php.

Name (print) _____

Address _____

City_____ **State** _____ **Zip** _____

Phone
(H) _____ **(O)** _____ **(FAX)** _____

E-mail _____

DUES ENCLOSED

____ **$30 Individual**
____ **$35 Family**
____ **$50 Sponsor**
____ **$100 Patron**

Skills (circle): research/dive/video/communications/writing/first aid/other:
_____

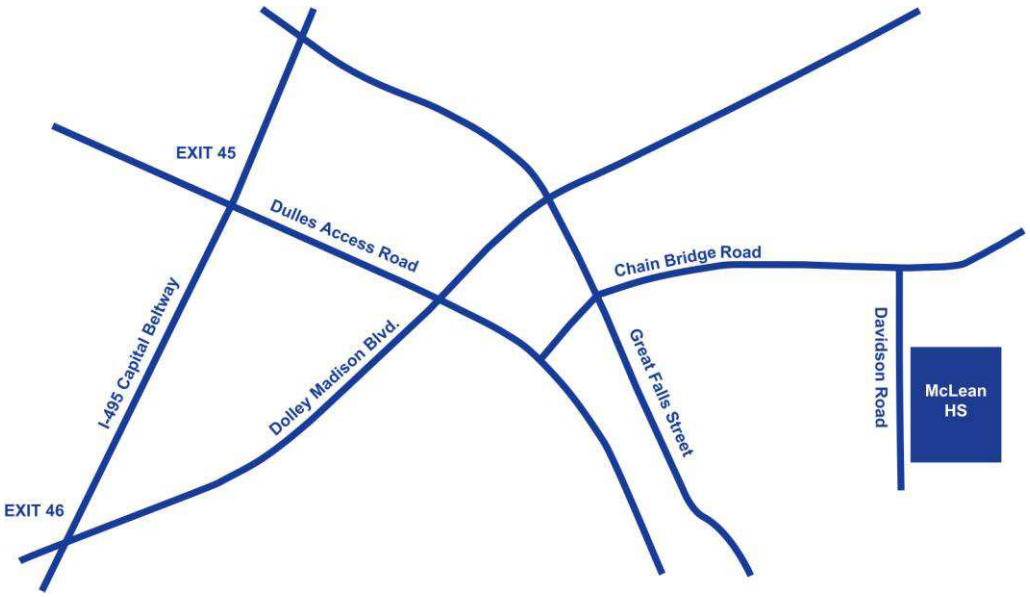
General membership meetings of the Maritime Archaeological and Historical Society are held on a bi-monthly basis, the second Tuesday of each month. Meetings are held at 7:30 p.m. at McLean High School, in McLean, Virginia, except in August and December. Meetings in those months are held at other locations for special events and holiday parties.

Please join us and bring a friend. The school is located on Davidson Road, just inside the Capital Beltway (I-495). Use Exit 45, coming from Maryland, or Exit 46 coming from Virginia.

Check the website www.MAHSNet.org for advisories about any schedule changes.

Renew Now!

It's time to renew your membership in MAHS. It's easy. Just complete the application form on the inside back cover and sign the Ethics Statement, enclose a check for your dues, and mail. Or pay on-line on MAHSNet.org. Thank you!



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Washington, DC 20026
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ADDRESS SERVICE REQUESTED