



Hudson River Maritime
Museum
Pilot Log 2011 / 2012

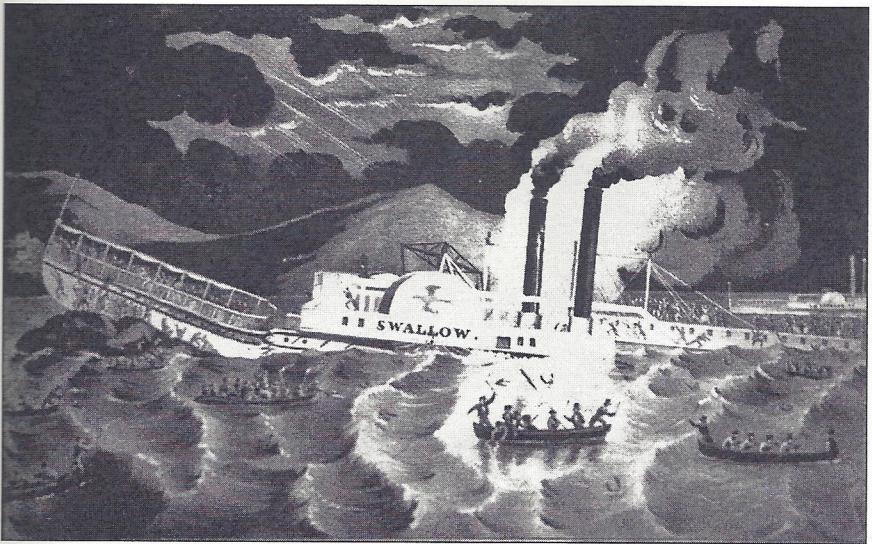
Sunken Treasures of the Hudson River

by Roger D. Flood, Professor, School of Marine and Atmospheric Sciences, Stony Brook University

The Hudson River has served as a focal point for human activity, providing food and resources for a growing population as well as enhancing transportation, communication and, more recently, recreation since the retreat of glaciers from the region more than 10,000 years ago. Activities on or near a water body such as the Hudson River inevitably lead to items both large and small becoming part of the river bed either through sea-level rise or through falling from the river surface. Many of the man-made materials that become part of the river bed can decay over time, but materials that are buried may take longer to decay than those that remain at the sediment surface.

While materials from both Native American and later residents can be found in the river, it is the extensive collection of larger shipwrecks and relicts of other major construction projects found on the bottom of the Hudson River that has sparked the interest of the present-day residents of the Hudson River Valley. In this time period the Hudson River has witnessed the birth and growth of a nation. Fighting along the Hudson River ~ Lake Champlain ~ Mohawk River corridor during the Revolutionary War resulted in some stinging defeats for the colonial forces at Fort Montgomery and at Kingston but also led to victories at Saratoga and at Fort Stanwix that eventually led to our new country.

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The steamboat *Swallow* was wrecked on the night of April 7, 1845 while traveling south on the Hudson in a snow squall and running up on a rocky islet off Athens, New York. Fifteen lives were lost. N. Currier lithograph, HRMM collection.

The Age of Steam was initiated for the Hudson River in 1807 when Robert Fulton ferried passengers from New York to Albany in record time, and large steam vessels provided fast transport between major Hudson River ports into the latter half of the 20th Century. The introduction of steam to the Hudson River did not displace the sail which remained a reliable and inexpensive way to transport people and cargo between numerous Hudson River ports. The Champlain Canal which opened in 1823 and the Erie Canal which opened in 1825 developed into an extensive network of canals that transported agricultural, industrial and human cargos throughout the region where the legacy of industrialization can still be seen. The Erie Canal was especially important in the development of the American Midwest via the Great Lakes.

Despite advancements in ship design, construction and navigation, accidents were inevitable. Tragic accidents were commonplace during the age of steam and many publications show images of burning ships and have stories of disastrous accidents. Newspaper articles recount sailing vessel that capsized in areas with gusty winds and treacherous currents, and many barges sank laden with cargo. Many of the ships lost should still be scattered along the Hudson River floor, and one can start to imagine the importance of the archaeological findings the Hudson River has to offer.

The task of finding and exploring submerged cultural resources in a modern, urban estuary can be difficult given limited visibility, high but variable sedimentation



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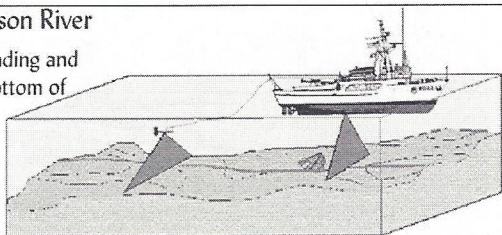
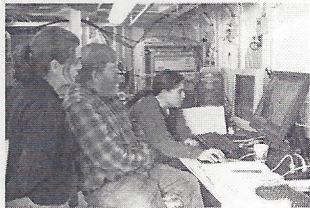
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rates, and modification by dredging and construction. However, our understanding of the archaeological record of the Hudson River has been vastly improved in the last decade as a result of a comprehensive benthic mapping program supported by the Hudson River Estuary Program of the New York State Department of Environmental Conservation (NYSDEC) undertaken by the Lamont-Doherty Earth Observatory (LDEO) of Columbia University and Stony Brook University's School of Marine and Atmospheric Sciences (SoMAS). The NYS-DEC program used high-resolution multibeam echo sounding and side-scan sonar to map the Hudson River bed for more than 180 miles between New York City and the Federal Dam at Troy. Initial interpretation of high-resolution multibeam data early in the project suggested that there were in excess of 300 features likely to be submerged cultural resources. Follow-on studies in 2004, 2005 and 2007 led by Roger Flood at SoMAS and supported by National Ocean and Atmospheric Administration Office of Ocean Exploration (NOAA-OE) and the National Park Service (NPS) have used ultra-high-resolution multibeam systems to image potential submerged cultural resources in higher resolution and revealed that many of the anomalies identified are indeed shipwrecks, most dating to the nineteenth century. Archaeological dive teams, such as the team at the Lake Champlain Maritime Museum, were also involved in the study resulting in exploratory dives on about a dozen of the features observed on the bathymetric data.

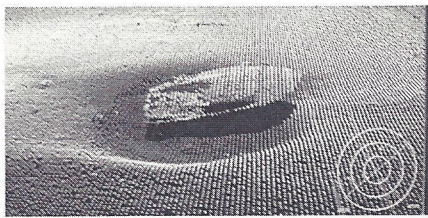
While the nautical lore and artistic legacy of the maritime Hudson River is well established and an integral part of the modern Hudson River, we are interested here in the Sunken Treasures, or Shipwrecks, of the Hudson River. Vessels that have run aground or been abandoned at the shoreline are not uncommon, but to appreciate a sunken vessel we need to better understand the conditions that lead to the sinking of the vessel and impacts of such a sinking. Vessels can be scuttled when no longer needed. Often everything of possible value has been salvaged and only the hull remains. Of more interest are vessels that sank as the result of misadventure

Mapping the bottom of the Hudson River

High-resolution multibeam echo sounding and side-scan sonar is used to map the bottom of the Hudson River.



Data collected from the sensors is constructed into images by on-board computers and catalogued for future study by dive teams specializing in submerged archeological investigation.



including hull failure, severe weather, fire, collision or any number of other events. These kinds of shipwrecks are of particular interest because they often sink quickly and, as a result, they can create time capsules which have a good chance of preserving the possessions of those on the vessel and thus providing unique insights into the river community. The wrecks themselves also can be well preserved because they tend to be beyond the reach of wave action although currents and organisms can still degrade the vessels over time. As such, they provide excellent opportunities to study the evolution of shipbuilding and the link to the shipping industry. However, we must still remember that shipwrecks resulting from misadventure can represent significant tragedies in the lives of the crew, operators and owners of the vessels and their cargos. The loss of the vessel may lead to lost lives and lost jobs as well as to the loss of the vessel (including future earnings) and the cargo. For some, this could have led to bankruptcy or business failure, something that we are all too familiar with in today's economy.

For the Hudson River, most of the cargo carried was grain, brick, coal, stone and other bulk materials that are of little value. Thus the true value of the sunken wrecks in the Hudson River is the insight that they provide us into the history of the river and the river community. Initially we gain these insights through viewing images of the submerged features and describing their structure and likely origin and integrating the submerged record into the known history of the Hudson

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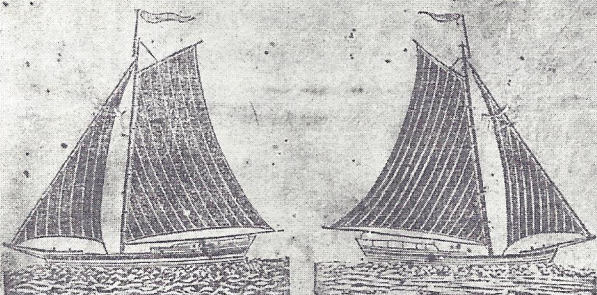
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River. Over time, selected wrecks need to be described in greater detail through diver investigation and high-resolution imaging and, ideally, selected wrecks would be excavated and perhaps recovered. The results of such detailed studies need to be clearly and widely reported so that all can benefit from the knowledge that will develop from these studies. While the temptation for an individual to try and recover a few bits for the mantlepiece is great, it would be a mistake (and indeed illegal) to recover pieces of these wrecks without doing a proper permitted archaeological excavation in which materials are recovered, preserved and studied using modern techniques that can put recovered materials in their proper cultural context. Whatever information the few bits would provide to the person who recovered the object, the loss of insight to the community would be far larger. ☉

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