THE INA QUARTERLY

BRINGING HISTORY TO LIGHT THROUGH THE SCIENCE OF SHIPWRECKS

VIRAZON II AND THE ALBANIA SHIPWRECK SURVEY

FORGOTTEN SCHOONER OF TORONTO'S FORT YORK

HIGHLIGHTS FROM 2018 BOARD MEETING IN VANCOUVER

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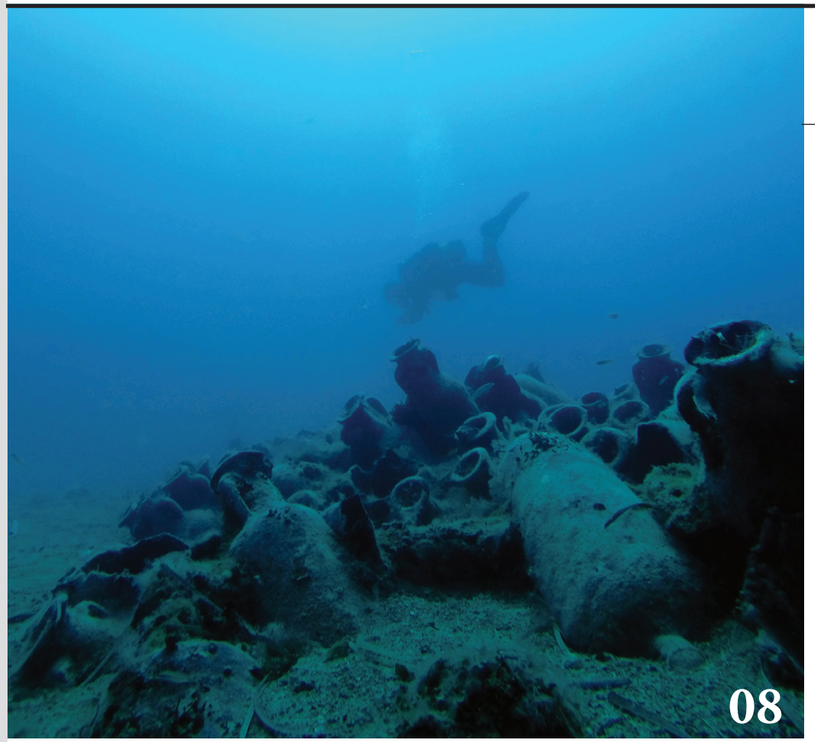

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ON THE COVER: *Virazon II* enters the Corinth Canal en route to Albania (photo by O. Köyağasıoğlu).

THE FORGOTTEN TREASURE OF FORT YORK

Recording a 19th-century schooner recovered from Toronto's CityPlace

JULIA HERBST

In 2015, during the construction of the CityPlace neighborhood in downtown Toronto, the remains of a 19th-century schooner were discovered near the intersection of Bathurst Street and Fort York Boulevard. The wreck was excavated by Archaeological Services, Inc. and was relocated to the Fort York National Historic Site, also in downtown Toronto. In the spring of 2018, a small team from Texas A&M University (TAMU), including Nautical Archaeology Program graduate students Carolyn Kennedy, Robin Galloso, and myself, as well as undergraduate Nicole Deere, travelled to Canada to record the remains of the vessel.

HISTORICAL CONTEXT

The ship, which was found alongside the remains of the Queen's Wharf (constructed in the early 1830s) and within a shore wall built during the 1870s, was very likely built in the late 1820s or early 1830s. A United States Coronet Head cent found in the aft mast step during the 2015 excavation also supports this proposed time period. The date on the coin is illegible due to wear, however, a preliminary analysis of its design suggests that it dates to 1828. This means the vessel was constructed at the start of a period of rapid growth in the Lake Ontario region.

During the 19th century, Toronto was

PHOTO: N. DEERE

This page: Women at work: TAMU graduate students Julia Herbst, Carolyn Kennedy and Robin Galloso removing ceiling planking

transformed from a small, military base into a thriving city and transportation hub. Fort York, the British military outpost around which the city developed, was established in 1793. A settlement arose around the fort, with its residents providing supplies and labor to the military. This community remained small throughout the War of 1812, but beginning in the late 1820s, the town experienced a period of rapid population growth. The region's economy expanded greatly during this period to meet the demands of its increasing number of residents. The road system around Lake Ontario was underdeveloped and unreliable throughout much of the 19th century and a reliable network of local railroads was not established until the 1860s. As a result, the cheapest and quickest way to transport goods and people in the region during the first half of the century was by water.

An increase in demand for commercial sailing vessels led to a boom in their construction between the 1820s and the 1870s. During this time, shipbuilders working on the Great Lakes adapted the designs of seagoing vessels to withstand local conditions, which included numerous unimproved and shallow harbors. One way in which shipbuilders did this was by constructing vessels with daggerboards or centerboards, both forms of retractable keels. The daggerboard (also known as a sliding keel) was raised and lowered vertically. The design was developed in the 1770s and was in use on the Great Lakes until the early 1800s, when it was replaced by the centerboard. Centerboards, which pivoted around a bolt in their forward end, were used widely in the region throughout the 19th century. Few plans of merchant schooners constructed on the Great Lakes during this period have survived and archaeologists have not had many opportunities to excavate the remains of such vessels. Consequently, the wreck of the CityPlace Schooner provides a unique opportunity for archaeologists to gain insight into the methods of Great Lakes' shipwrights constructing merchant vessels during the early 19th century.

This page: The United States Coronet Head cent found in the mast step. **Opposite page:** Photogrammetric models of the site (above) and of the starboard profile (below) starboard profile (below)

2018 FIELD SEASON

The goal of the 2018 field season was to build upon the work performed during the 2015 excavation by conducting an in-depth study of the remains in order to gain information regarding the vessel's construction features, date of construction, ownership, and use. The team employed two principal methods of recording during the field season, namely, direct measurement and photogrammetry. We recorded the length, molded, and sided dimensions of each timber at regular intervals, along with the locations of fasteners and other construction features. We then used the collected information to prepare scaled drawings of the remains. After recording the two layers of ceiling planking, the team removed the same in order to access the frames underneath and record their angles and construction. Before the frames could be measured, a significant amount of sediment trapped between them needed to be cleared. The team removed and screened all of this mud and dirt, discovering a number of small artifacts during the process. The artifacts recovered were photographed, documented, and turned over to the City of Toronto for conservation, storage, and potential future display. The team also used photogrammetry to document the remains of the vessel. We took thousands of photographs of the hull and its disarticulated knees, stem, and sternpost. We then used these images to prepare three-dimensional models of the disarticulated pieces and of the hull, both before and after the ceiling planking was removed. The models were uploaded to Sketchfab, an online platform for sharing 3D models, and made available to the public.

Another goal of the project was to increase public interest in the wreck. Throughout the field season, the team maintained Facebook, Twitter, and Instagram accounts, using social media to provide updates on our progress and share the photogrammetric models of the vessel's remains. Additionally, each day on site, we hosted an hour of official public visitation and, outside of this window, we frequently answered questions from those visiting the museum or passers-by. At the end of the field season, our small team participated in a short, public program at Fort York, along with members of the Friends of Fort York and individuals from the Fort York National Historic Site, Archaeological Services, Inc., and the City of Toronto, to discuss the wreck, our methodology, and our initial findings with the public.

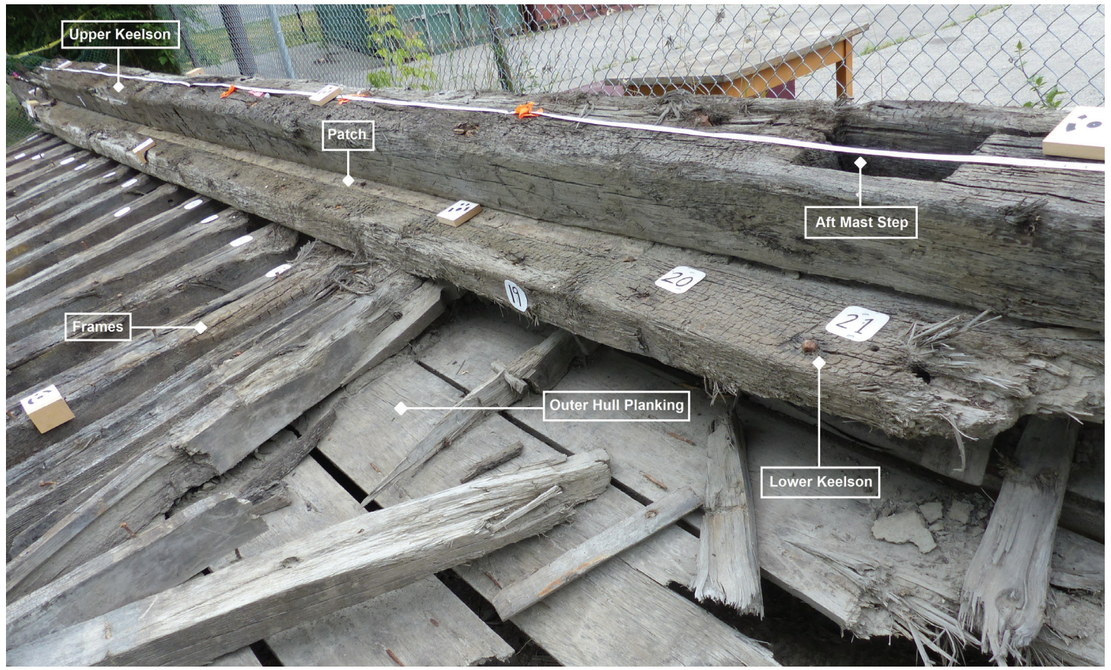
PHOTOS, THIS PAGE: J. HERBST; OPPOSITE PAGE: R. GALLOSO

CONSTRUCTION FEATURES AND ARTIFACTS

The extant remains of the vessel include centerline timbers measuring approximately 15.24 m (50 ft) in length, consisting of a lower keel, an upper keel, port and starboard lower keelsons, and an upper keelson. Two mast-steps were carved into the upper keelson, located approximately 1.5 m (5 ft) and 9 m (29.5 ft) back from the forward end of the remains. Commencing at the bow, approximately 9 m (30 ft) of the port side is preserved to the turn of the bilge, including paired frames, hull planking, and two layers of ceiling planking. Two knees and portions of the stem and sternpost were found disarticulated from the wreck. A variety of fasteners were used throughout the vessel, including iron bolts, nails, and pegged and unpegged treenails. With the exception of the upper layer of ceiling planking and a patch in the lower keelson, both of which appear to be of pine, all of the timbers were likely carved from white oak.

The CityPlace Schooner has a unique centerline construction which suggests that the vessel was originally constructed

The vessel was initially built with either a centerboard or daggerboard, which was later removed and its absence offset by the addition of the lower keel and patch.



PHOTOS, THIS PAGE: J. HERBST. OPPOSITE PAGE: J. HERBST

with either a daggerboard or centerboard that was subsequently removed and the vessel modified. The upper keel, which is carved from a single timber, increases in molded dimension just aft of the 11th frame to form a trunk. This trunk, which is 4 m (13.3 ft) long, would have served as the watertight compartment that housed the vessel's daggerboard or centerboard prior to its removal. Instead of crossing over the keel, all of the floors along the length of the trunk are notched into it. Directly over the trunk, a patch is visible in each of the lower keelsons, protruding out approximately 3.8 cm from underneath the upper keelson on both sides of the vessel. This patch was likely inserted when the schooner was modified in order to seal the space previously occupied by the daggerboard or centerboard. The lower keel has a much larger molded dimension than the upper keel. Its forward end terminates in a smooth cut that matches the lower end of the outer stem; however, there is no indication that these two pieces were ever fastened together, suggesting that the lower keel did not play an integral role in the vessel's initial structure. Instead, the upper keel likely served as the schooner's original keel, while the lower keel was probably added when the daggerboard was removed in order to increase the vessel's lateral resistance.

The majority of artifacts discovered during the 2018 season were materials that would have been used in the construction of the vessel, including iron fasteners, caulking material, and shaped pieces of wood, likely used as wedges. The team also recovered ceramic sherds and pieces of charcoal. Our most exciting find was an intact sheave, discovered when removing sediment from between the frames. The piece, which formed part of the vessel's

This page: Nicole Deere records the sternpost. **Opposite page, from top:** Robin Galloso and Carolyn Kennedy record the hull; Labeled view of the schooner from aft of midships looking towards the bow.

rigging, measures approximately 15.2 cm in diameter and appears to be made of *lignum vitae*, a very dense and durable hardwood. A smaller sheave recovered during the 2015 excavation had a British Ordnance broad arrow carved into its face; the 2018 sheave, however, was unmarked.

PRELIMINARY ANALYSIS OF DATA AND ONGOING WORK

Preliminary analysis of the data collected in 2018 suggests that the vessel was a merchant schooner dating to the early 19th century. Its two layers of ceiling planking with evidence of caulking suggest that the vessel carried grain or other cargo that required waterproofing of the hull. Based on the schooner's centerline construction, the vessel was initially built with either a centerboard or daggerboard, which was later removed and its absence offset by the addition of the lower keel and patch. The reason for the vessel's modification is unknown. It is possible that the owners found the original design too leaky or that they determined the daggerboard/centerboard was no longer needed as the century progressed and harbors along the Great Lakes were improved and deepened. The CityPlace Schooner was probably scuttled or abandoned at the end of its working life and was then used as fill to expand Toronto's waterfront.

A full analysis of the construction of the CityPlace Schooner will be the subject of my TAMU Master's thesis, which will include a complete description of the recorded remains, along with conjectural lines drawings and construction drawings of the vessel. Additional insight regarding the date and location of the vessel's construction is anticipated through further analysis of both the mast-step coin and the vessel's timbers. I intend to continue ongoing historical research in an attempt to identify this enigmatic and historically significant vessel.

ACKNOWLEDGMENTS

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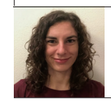

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