Feature Article: Salvaging the Alvin Clark: A Project Before Its Time
As I sit down to write this, the staff and board are well underway in our planning for the museum’s 50th anniversary in 2019. Beyond celebrating this major milestone (and we certainly do intend to celebrate!), we want to use this anniversary to continue building on the museum’s foundation in order to move forward on a number of important fronts. These include creatively enhancing the visitor experience throughout our exhibits and USS Cobia; expanding impactful educational programs for youth and adults; increasing public access to our collections and archives; growing both our audiences and our financial support base, and leveraging the important alliances and partnerships in which we are actively involved.

We are stewards and story-tellers of a shared Great Lakes maritime heritage that is as relevant today as it was when we opened our doors to the public in 1969. This is where our renewed commitment to our curatorial and scholarly work comes into play. As a collections-based, accredited museum, we’re more than just a fun visitor attraction: we are part of a much larger alliance of museums working toward the common goal of meaningfully connecting people to the world they live in; in our case, Wisconsin and the Great Lakes.

Since our founding, we’ve been known for excellence. Maintaining that focus on excellence and innovation will be key to our future success. It certainly took vision, imagination, and grit to found the museum back in 1969. It will take vision, grit and a renewed commitment to fulfilling our mission to sustain and grow our efforts in the next 50 years. We already reach tens of thousands of people each year. And we aspire to reach even more as we become more accessible and inclusive. We consider you, our readers, part of the museum family. So we’re looking forward to seeing you here as we celebrate 50 years in 2019!
Collections Update: IMLS Grant Received!
By Tiffany Charles, Director of Collections

The Wisconsin Maritime Museum has been awarded an Institute of Museum and Library Sciences (IMLS) grant for Collections Inventory, Storage Planning, and Onsite Training. This project is centered on the collection housed at our offsite facility, largely comprised of local and Wisconsin-built boats. This initiative, supported through IMLS’s Museums for America/ Collections Stewardship Program, allows the Museum to hire temporary staff, contract a trained conservator for staff and volunteer training, complete an inventory of over 2,000 artifacts stored offsite, and conduct condition photography. It also provides funds to hire consultants to evaluate spatial needs and facility requirements. The compilation of all this data will form the basis on which we determine the best solution for the storage upgrade.

Whaleback Ships and the American Steel Barge Company
By C. Roger Pellett

The book Whaleback Ships and the American Steel Barge Company by C. Roger Pellett fits a tremendous amount of detailed information in its 216 pages. Within the text, Pellett shares the history of one of the more unique vessels to ever sail the Great Lakes: the whaleback steamer. Pellett focuses the first chapters on the inventor of the whaleback, Alexander McDougall and the process of making his design a reality. His design was in response to a common problem during the 1880s shipping industry boom: a way to ship large cargoes using fewer ships while making fewer trips. His design entailed a vessel with cylindrical decking, a wider flat bottom, and bow and stern turrets for equipment storage. These features enhanced hold tonnage, allowing larger quantities of cargo per vessel. However, he had difficulties enlisting regional shipyards to build his strange cigar-shaped ship. So much so that he reached out to a shipyard in Wilmington, Delaware to build his new vessel!

Pellett relates how McDougall’s company grew by bringing in industry stakeholders and building the American Steel Barge Company shipyard in Superior, WI, to build a fleet of whaleback cargo ships. He also shares unfortunate flaws in the whaleback’s design that hindered its pitch in waves and problems with watertight loading hatches, both contributing factors in future whaleback wrecks.

Then, Pellett explores the company’s evolution after these setbacks and how stakeholder John D. Rockefeller tried to sustain it with vessel construction for his company’s use in the early 1900s. However, at this time the building of 600 foot-plus freighters also became commonplace contributing to the whaleback’s obsolescence.

Throughout the text Pellett uses photographs and blueprints from UW Superior and the Superior Public Museum Collections. These great images show off the design of the whaleback compared to other vessels of the time. Appendices are also provided, including a glossary of nautical terms and charts of historic company operations. These additions provide a well-rounded account of the whaleback, its creator, and the company that was born from a remarkable idea.


Lisa Pike is the Editor of The Anchor and the Museum’s Archives Assistant. She can be reached at (920) 684-0218 x113 or editor@wisconsinmaritime.org
Almost fifty years ago, in summer 1969, a unique underwater venture culminated at Marinette Marine Corporation in Marinette, Wisconsin. That July, the Alvin Clark, a sailing vessel of Civil War vintage, was raised from the bottom of Green Bay, ending a salvage project that had taken nearly two years. A group of dedicated scuba sport divers had successfully completed the operation, which required about 3,300 dives. The raised vessel needed immediate wood preservative treatments, as well as a home for eventual public display. A comprehensive plan to conserve and showcase the Clark got off to a great start, but did not end well, and this unique example of 19th century maritime transportation and technology was lost forever. This article will revisit that project, its accomplishments, and the lamentable aftermath. Now, five decades after the event, fewer than six individuals from the “nucleus group” of the project still survive; this writer is one of them.

The Alvin Clark was a 2-masted sailing craft that measured 113- feet long, 23-feet wide, and weighed 220 gross tons. It often has been referred to as a schooner, but technically it was a brigantine, meaning that the foremost (front) was squared-rigged, whereas the mainmast (rear) had a schooner-like boom sail and a gaff-topsail. Brigantines were quite common around the Civil War Era, but were largely supplanted by the popular fore-andaft schooner sail-rigs in later years. The vessel was also a canaller, possessing a particular size and features like a retractable centerboard that allowed her to transit the Welland Canal and access all five Great Lakes.

John Pearson Clark, a highly successful Detroit businessman who traded in lumber, fish, and mercantile supplies, built the Alvin Clark in 1846; he named the vessel after his son. Apparently, the Clark’s early years were spent in the salt trade on the Eastern Lakes, as suggested by records from various ports. Salt was an enormously important substance for preserving and seasoning foodstuffs and countering wood rot; it came up the Erie Canal to Buffalo, New York, and was distributed far and wide from there. By 1852, the railroads reached Detroit and huge salt domes were discovered under Lake Huron, so the eastern salt trade dwindled. The Clark was sold and is then documented visiting many ports on the Western Lakes, carrying lumber, fish, grain, or coal.

In 1855, the Higgie family in Racine purchased the Clark. Although they were skilled mariners and respected maritime entrepreneurs, the Higgies also had a dark side; they smuggled contraband lumber. During the great logging era, various “lumber barons” openly poached trees off government lands, without having a license or paying a user-fee. These robbers enlisted certain unscrupulous lake captains to run their stolen lumber to Chicago, where it could be instantly sold on a thriving black-market at great profit. The Higgies, particularly Captain William, were ready participants in this piracy. Records depict one instance where federal timber marshals arrested and jailed Higgie and confiscated his illegal cargo. However, his confederates broke him out of jail, repossessed the cargo, and escaped cleanly onto Lake Michigan! The Alvin Clark no doubt played a role in many such illicit escapades.

In summer 1864, the brigantine was probably on another contraband mission to Oconto, Wisconsin. The craft was sailing light in mid-Green Bay, when it was hit with tornadolike winds, just north of Chambers Island.

Continued on page 5...
After the foundering, some plans were formulated to salvage the vessel, but never came to fruition, probably due to the water depth involved. The whole incident was then forgotten for over 100 years, until late October 1967. At that time, commercial trawling was legal on Green Bay; pesky alewives were in demand as ingredients in pet food. The fishboat *Dellie W.*, owned by the Garbowski Fisheries in Marinette, was cruising along off Chambers Island when her nets snagged on some large immovable object. Unable to detach their nets, the fishermen enlisted aid from Frank Hoffmann, a well-known scuba diver living at Egg Harbor on the Door Peninsula. Hoffmann owned a bar and grill there, and operated a charter service for shipwreck diving.

Hoffmann followed the net’s lead line down to 100 feet underwater, where it was found tightly entangled around the bow of a sailing ship that appeared to be totally intact. Realizing one man could not free the nets, Hoffmann surfaced and called in diving friends from Chicago and Madison. On 6 November 1967, the first exploratory dives were conducted on the vessel; much to everyone’s astonishment, it clearly was a totally intact schooner, resting upright with all superstructure in place and the masts towering to 40-feet beneath the surface. Even the loading lines, painted down the ship’s bow, were visible. Indeed, this was a unique artifact.

Notably, diving conditions in Green Bay were very arduous in the 1960s. Infestation by exotic mussels in recent years has created great underwater visibility and allowed surface light to penetrate deeply. Fifty years ago, all surface light was absorbed or scattered out by fine particulate matter, and below 50-feet inky blackness prevailed; lateral visibility was usually only 3 – 4 feet. Objects on the wreck could only be seen within the yellow halo emitted by a diver’s light. Green Bay also develops two thermoclines in summer, so water temperature at 100-feet hovers around 40 degrees year-round.

The divers returned to shore, hoping to dive again the next day, but stormy weather and mechanical boat problems prevented any meaningful further excursions. Winter weather soon swept the Bay, halting all diving activities until spring 1968. Soon after spring icebreak, Hoffmann’s dive crew successfully removed the nets from the wreck and thoroughly explored it. Unfortunately, the interior of the craft was filled with dark, gelatinous silt that prevented entry into the vessel’s cabins or holds.

The team decided to remove the silt that plugged the companionway leading into the cabins and galley, hoping to retrieve artifacts that might provide clues to the age and identity of the ship. A 2-inch diameter plastic pipe was run from a jury-rigged suction pump on the surface down into the silted cabin. Remarkably, after some experimentation, the pump ejected a stream of muddy water, and the plug was slowly eroded. After several weeks of pumping, access to the galley was achieved and some artifacts were retrieved. Markings on a small bowl revealed a production date in 1860; furthermore, that manufacturer went out of business by the end of the Civil War. While not definitive, this find strongly suggested that the vessel was from Civil War days.

Today one might think that identifying such a prominent artifact as a sunken ship should not be difficult.

Continued on page 6...
...Salvaging the *Alvin Clark*: A Project Before Its Time

Now fully outfitted, the dive team decided to continue excavating the wreck, hoping to find definitive evidence of its identity. The LCM (*Cleo’s Barge*) was equipped with a high flow, reversible pump, capable of creating high suction or ejecting pressurized water. An 8-inch piping system was run from the pump down into the ship’s interior, where a dredging scoop channeled the sediment into the pipe. The silt was so compacted that divers had to sustain the uptake with a trenching shovel to assure a continuous flow. Without this help, the scoop would simply burrow out an empty pit until no more silt was swept up. This diver assisted routine was highly successful, and the silt level was rapidly reduced.

This underwater work required some special alterations and departures from normal diving protocols. The dark, frigid conditions, often with zero visibility, presented certain challenges to diver wellbeing. First, the depth dictated that times longer than 20-minutes would require decompression to prevent the bends. This meant surfacing in stages, allowing excess nitrogen to vent safely from bodily tissues. However, the imperfect decompression tables available in the 1960s still resulted in a 3-5% incidence of the bends. Since hundreds of dives would be conducted during the project, that risk seemed unacceptable; therefore, all dives would be restricted to non-decompression profiles. Besides enhancing safety, shortened dive times would allow a second non-decompression dive that same day, if an adequate interval for degassing was taken on the surface.

Another reason to restrict bottom times was equipment-related. All dive suits available then were wetsuit types; the dry-suit, essentially an underwater space suit, would not come into common use in sport diving until about 1972. Foam-neoprene wetsuits compress with depth; therefore, the standard ¼-inch thick suit at 100-feet was only 1/16- inch thick, losing...
...Salvaging the *Alvin Clark*: A Project Before Its Time

much of its insulating power. The possibility of diver hypothermia was very real. In addition, the dense silt was an excellent thermal conductor, rapidly robbing body heat from the diver.

A final modification involved the time-honored dive buddy system. While two person teams were employed for much of the project, not so for dredging. The nature of those dives and the equipment being used cancelled the value of this conventional approach. Envision this: Two divers in close quarters are on a dredging operation in side the vessel. Once the suction dredge starts, the ambient visibility becomes zero; yet one diver is armed with a suction device that could yank the dive equipment right off the adjacent diver. Under these conditions, it was quickly determined that the companion diver was an endangered species.

To mitigate all the potential problems, the following system was deployed: The LCM was always anchored at a fixed mooring, roughly midship on the wreck. Therefore, a descending diver would always know where he would land on the ship, lessening the chances of dark-water disorientation. A fixed mooring also created a point of reference, so that the dive supervisor could reliably tell by the diver’s exhaust bubbles where he was on the wreck. All dive times were to be non-decompression (15-20 minutes), which would consume only one-half of a diver’s air supply (double cylinders). As additional backups, a series of fully operational scuba rigs were placed at strategic spots around the wreck.

A single “Working Diver” would descend to the wreck to perform his assigned task; a fully equipped “Safety Diver” immediately became stationed on the drop gate of the LCM. As indicated by his exhalation bubbles, if the Working Diver was not on route to the surface within one minute over his assigned time, the Safety Diver went down to check on the situation. Usually the Working Diver surfaced without incident, so the Safety Diver became the next Working Diver and another Safety Diver moved onto the drop gate. Using this system, we could cycle diver after diver, such that each could make two dives a day (occasionally three) without decompression. Did it work? About 3,300 dives were completed without a notable accident or a case of the bends.

With this dredging procedure in full force, the silt was steadily removed from the wreck, exposing numerous wonderfully preserved artifacts. The salvage pump was equipped with several special filters, so even the smallest items were captured. Certain navigation instruments were recovered: the captain’s binoculars still functioned nicely, as did the ship’s spare compass and octant. Dozens of blocks, sheaves, sail-rings, and
pieces of rigging were retrieved. Numerous tools and hardware supplies were recovered. A large collection of dishes, plates, and kitchen utensils surfaced; one large earthenware crock had particular significance. Within this container was a preserved quantity of “crock cheese,” a common food staple aboard schooners. Microbiological examination retrieved from it viable bacteria that had formed the cheese; experts at Kraft Foods declared it to be the oldest specimen of edible cheese ever found, 105-years old at the time. Interestingly, several divers sampled the cheese and declared the taste “awful.” Reportedly, most crock cheeses aboard ships were routinely pretty shoddy, due to impurity of the microbial cultures used for the fermentation.

Several other special artifacts were recovered. A seaman’s “ditty bag” containing a variety of personal materials was found. Within it was a laundry stencil from Racine bearing a sailor’s name. Research disclosed that this individual spent most of his career aboard the Alvin Clark. This fact, along with retrieved newspaper reports, now suggested the vessel’s identity as the Alvin Clark. At this same time, a duck with intact flesh was recovered from the galley. The bird was a deep-diving species, so it was first assumed that it simply became trapped and drowned within the derelict. However, closer inspection by a professional

chef concluded that it had been prepared for dinner! The vessel’s identity now becoming clear, it was also learned that the captain and mate had perished in the sinking. Consequently, divers working below decks in the dark, silty environment became very apprehensive whenever any large, squishy object was encountered. However, no human remains were ever found on the vessel.

At this point, the salvage project was being followed coast to coast by the news media. Network reporters like Walter Cronkite, Roger Mudd, and Charles Kuralt described the ongoing events. Green Bay TV offered weekly coverage of the progress. Prominent institutions like the National Geographic Society and the Associated Press had photographers on site at regular intervals. Largely through efforts by Hoffmann, funds and materials to raise the vessel became available. This would still be no small task, even though most of the compacted silt had been removed.

The first job was to remove the masts, which were set into a “step” notched into the ship’s keelson. Where they passed through the deck, the masts were secured by tightly fitted wooden staves that had to be removed. These wedges were so water-swollen that a custom hydraulic tool had to be devised to push them up and out from below decks; a force of over 5-tons was required to remove each one. Once the wedges were out, a large crane-barge lifted each “stick” to the surface. The foremast still had its “crow’s nest” platform in place, along with some rope rigging!

The second task was to place cables underneath the hull; six cables would be required to evenly distribute lifting forces along the hull. This required a device to tunnel beneath the vessel. A special “dredging nozzle” was invented that could be attached to the fire hose from the salvage pump and deliver water at pressure.

Continued on page 9...
over 150 psi. However, a scuba diver cannot handle a standard fire hose underwater because he’s essentially weightless; the kickback forces would toss him around like a venting balloon. The new nozzle was hydro-dynamically-balanced by venting equal amounts of water both forward and back, so a diver could easily manipulate it. It was attached to a long aluminum pipe that was bent to match the contour of the ship’s hull. Two divers operated the rig: one to steady the fire hose and another to guide the pipe as it burrowed its way under the hull. After the dredging pipe popped up on the opposite side of the ship, a nylon line was attached and pulled back underneath the hull. A cable was attached to this line and winched into place.

Installing six cables took several months because not every pass of the pipe took a satisfactory trajectory, and some had to be redone. Once in place, the supporting cables were connected to lifting cables from the surface, which were attached to manually operated winches aboard a huge barge. On 20 July 1969, the lift began by a contingent of volunteers who would crank the winches. One hundred turns of the cranks would be required to lift the Clark five inches, so 20 hours of continuous cranking would be required to raise the schooner under the barge. Fortunately, mid-July has meteorologically the calmest weather in any given year on Lake Michigan, and that trend was repeated in 1969; the Clark was successfully lifted, secured beneath the salvage barge, and floated to the Marinette Marine shipyard.

On 19 July, the shipyard opened its grounds to the public wanting to see the Mystery Ship lifted to the surface. An estimated 20,000 spectators invaded the city of Marinette to witness the event. The lift barge was detached from the Clark and the cables re-rigged to cranes upon the shore; about noon, before a huge crowd of onlookers, the schooner broke the surface. The dive crew pumped out the holds and washed down the deck, revealing a pristine, undamaged ship; amazingly, two hours later, all the cables were retracted, and the Alvin Clark floated unassisted after 105 years underwater! The excited crowd could not be restrained and rushed aboard the craft, occasionally pilfering artifacts or crawling into remote recesses of the schooner!

Prompt preservation action was needed to prevent rapid deterioration of this unique artifact. Only one analogous situation had ever previously occurred: that of the Vasa in Sweden. That 17th century warship and been preserved with national support through a multi-year misting process with a poly-glycol chemical. That technique was far too expensive and complex.
...Salvaging the Alvin Clark: A Project Before Its Time

for preserving the Clark, so a dry-kiln process was employed. The vessel was placed inside a plastic tent where the humidity was controlled and slowly reduced to pull the excessive moisture from the ship’s wood structures without cracking. This process required about two years to successfully complete. The Clark was eventually placed on display, floating in a small lagoon, within a private marina called the “Mystery Ship Seaport,” located just below the interstate bridge in Menominee, Michigan. The land was donated by the city and a substantial visitor’s center and artifact museum were constructed. The vessel was again outfitted and re-rigged just as it would have been in 1864.

While this historical attraction was initially successful, it was not so in the long run. As years passed, no steady flow or increase in tourist traffic developed. Moreover, the vessel remained outside, exposed to the elements where decline slowly began; clearly, a protective building was needed. Despite many attempts to obtain grants or other financial aid, no monetary assistance was forthcoming and the Clark rapidly deteriorated. Several attempts to sell or relocate the vessel all flopped. The failure of the schooner to be a thriving tourist attraction led to disputes between Hoffmann and the city of Menominee. Numerous acts of thievery and vandalism occurred on the property. Hoffmann developed a drinking problem and eventually moved to Florida.

By the 1990s, the craft had been declared a public nuisance and liability; it was unceremoniously bulldozed in 1994, despite several last-minute attempts to save it.

Looking back 50 years, one can speculate as to why the Alvin Clark museum ultimately failed, after so many sterling successes. Location is often suggested...
...Salvaging the *Alvin Clark*: A Project Before Its Time

As one reason: perhaps the craft should have gone to Door County, which boasts enormous tourist traffic, far beyond that of the Marinette-Menominee area. Obviously, lack of funding was a critical factor, but in 1969 there were no precedents to provide any insight on what long-term maintenance of such an unusual artifact might cost or what degree of tourist traffic it could steadily command. Sadly, it was also realized that the tremendous interest generated by the salvage project itself was due to the exciting diving exploits and the mystery shrouding the vessel. Once the *Clark* was raised and the mysteries solved, further public interest in the ship quickly dissipated.

But there is also a bright side. Respect for and fascination with maritime heritage has recently become a fairly notable genre on the Great Lakes, whereas it was almost indeterminate in the 1960s. Today the *Alvin Clark* Project is considered an “archetypical teachable moment” for the protocols required to salvage and conserve such a large museum artifact. Its story has become somewhat of a shipwreck diving classic, whereas various archeologists consider it a classroom example for the management of a unique submerged cultural resource. Lake freighter museum ships and replica sailing vessels are contemporarily popular tourist attractions. Noteworthy archeological specimens like the Confederate submarine *Hunley* are prominently displayed in conservation centers. How the *Alvin Clark* might fare today as a museum piece remains unknowable; truly, it was a project before its time.

A Note about Wisconsin Shipwrecks:

Dr. Boyd’s account of the salvage of the *Alvin Clark* lays out in detail the challenges of the recovery of submerged artifacts of all sizes. It’s not just the recovery, it’s not just the conservation, and it’s not just the long term preservation; it’s all of these complicated processes combined that makes every recovery a challenge. With today’s water quality and the wonderful advances in the technology, Wisconsin’s unique maritime heritage can be enjoyed from the comfort of your dining room table (See WisconsinShipwrecks.org, or WisconsinMaritime.org). There is no need to raise the wreck or bring home a souvenir today. Title to Wisconsin’s historic shipwrecks is held in public trust by the residents of Wisconsin (Wisconsin Statue 44.47). As stewards of these fascinating historical, archaeological and recreational resources, Wisconsin residents and recreational and professional divers practice responsible diver visitation. The Wisconsin Historical Society and a great group of volunteers maintain buoys on 28 wrecks and provides location information on many others (WisconsinShipwrecks.org). Divers may not remove artifacts or structural elements from historic shipwrecks or other archeological sites located on public lake bottoms—including the Great Lakes and inland lakes—and federal, state, county or municipally-owned waterways. (Wis. 44.47 and 29.05). Office of the State Archaeologist, Wisconsin Historical Society.

Selected references:


Dr. Richard Boyd is a founding member of the Professional Association of Diving Instructors, a diver with expertise in shipwreck research and nautical archaeology, and the author of many articles on Great Lakes maritime history.

By John H. Purves

Excerpt Chapter 5 “The George M. Humphrey”

Chapter Five
The George M. Humphrey

Captain Roen’s greatest salvage achievement and the one which gained him national fame in marine circles was the salvage of the Str. “George M. Humphrey” which had sunk after a collision with the “D. M. Clemson” in the Straits of Mackinac.

The Collision occurred at about 2:30 A.M. June 15, 1943, abreast and somewhat south of Graham Shoals light in the Straits of Mackinac, Michigan.

The two vessels were of identical dimensions, namely 580 feet length, 60-foot beam, 32 feet moulded depth. They were built by the same company, American Shipbuilding Co., Lorain, Ohio, in the same yard, the “Clemson” in 1916 and the “Humphrey” in 1927. Prior to the collision the “Humphrey”, then owned by the Kinsman Transit Company, was west bound through the Straits of Mackinac carrying 13,992 tons of iron ore. The “D.M. Clemson”, owned by the Pittsburgh Steamship Company, having departed Chicago, was proceeding in an easterly direction through the Straits of Mackinac without cargo.

Dense fog had set in as these vessels finally became aware of the presence of one another by virtue of their fog signals. They finally established a one-blast passing agreement, which meant that each ship would direct its course to starboard. Although the “Clemson” stopped her engines and then reversed them for a short period of time prior to the collision, the boats collided. The “Clemson’s” bow struck the “Humphrey” abreast of her No. 3 hatch, tearing a hole approximately 18 x 22 feet in her starboard side. After the collision, the forward momentum of the loaded vessel, the “Humphrey”, was so much greater than that of the “Clemson” that both vessels continued on approximately the same course as the “Humphrey” was going, pulling the “Clemson” free from the hole in the “Humphrey’s” starboard side.

The ships then parted and 20 minutes later, the “Humphrey” sank, about 1 ½ miles northeast of the Michigan State ferry docks, Mackinaw City, Mich. In approximately 80 feet of water. Her location was marked by the fact that both of her spars extended approximately 10 feet above the surface of the water. No lives were lost but some few crew members suffered personal injuries.

When the “Humphrey” sank, the underwriters paid the Kinsman Transit Company the sum of $860,000 as a total loss and the owners of the “Humphrey” abandoned all of their interest in the vessel to the underwriters.

The position of the “Humphrey”, as she rested on the bottom of the Straits of Mackinac, was such that she constituted a menace to navigation, her position being approximately 400-600 feet to the southerly of the steamboat course taken by vessels passing through the straits south of Bois Blanc Island.

Federal statutes provide for the removal of sunken water craft by the Secretary of War acting through his agents. In most instances this work is delegated to the United States Army Engineers.

Pursuant to such authority the Army Engineers, through the District Engineer, located at Detroit, found “that navigation of the navigable waters of the United States is obstructed and endangered by the “Humphrey”. This being the case, ways and means were sought to remove the vessel or to cut her down so that there would be a minimum of 35 feet of water over all parts of her on low water datum.

The foremost salvage outfit in the country, Merritt, Chapman & Scott, the engaged in salvage of the “Normandie” at a dock in New York City, sent its divers and engineers to the scene of the wreck and reported that the cost of removal would be $500,000 with no guarantee of success. Two concerns bid for the job of cutting the vessel down. Those bids ranged from $45,000 down. During September, 1943, Captain Roen entered into negotiations with U.S. Engineer’s office looking toward a contract for the salvage of the “Humphrey”. During those negotiations the War Production Board, instructed the U.S. Engineer’s office that the vessel should not be demolished until all means for her salvage had been exhausted. About October 1, 1943, Capt. Roen finally obtained a salvage contract which, among other things, provided:

Captain Roen was to commence work of salvage immediately and continue until October 1, 1944. In the even that he was able to salvage the vessel, all rights, title, and interest in it and its equipment would vest in him along with title to the cargo. In the event he was unable to salvage the vessel, the U.S. engineers were given the option to require him to demolish to their satisfaction or to let the salvage contract to another party.

Continued on page 13...
The Anchor

...Roen Steamship Company: The Way It Was, 1909-1976

Captain Roen started to work on the wreck in the latter part of October in 1943 after supplying a performance bond in the amount of $50,000 and a payment bond in the amount of $15,000 insuring prompt payment of all material and labor. Great difficulty was experienced in obtaining the performance bond principally because the bonding companies were wholly unfamiliar with salvage work and were in possession of the report given by Merritt, Chapman & Scott. Finally, Continental Casualty wrote these bonds.

The first operation for salvage consisted in making a careful survey of the vessel to determine the damage which she had sustained and the removal of the cargo so as to lighten the vessel as much as possible. During the fall of 1943 Captain Roen, with the “Industry” and “Maitland”, through the use of clam shell buckets, removed some 9,000 tons of the iron ore cargo and eventually sold it to The Algoma Steel Company of Sault Ste. Marie, Ontario, for $3.00 per ton, delivered, after U.S. Steel Company (to whom the cargo was originally consigned) and other American steel companies refused to purchase it. All salvors agree that once the suction. However, such equipment was never required.

The procedure for raising the vessel was as follows:

The water bottom and the side tanks in which water ballast is carried when the vessel is without cargo, were tested and all leaks were plugged with the exception, of course, of the No. 1 starboard side tank which had been ripped wide open as the result of the collision. Naval architects estimated that if each of the remaining side tanks and water bottoms were completely freed of water they would provide a lift of approximately 7000 tons. They also estimated that the dead weight of the “Humphrey” as she lay on the bottom of the lake was approximately 5,500 tons, including the ore which could not be removed. It was, therefore, possible to cause the vessel to float by merely pumping her water bottoms and side tanks dry. Since, however, these tanks are on the bottom and rise only half way up the sides of the vessel, her buoyancy would be on the bottom and she would rise the surface upside down. All salvors agree that once a vessel of this type capsizes it is virtually impossible to right her. Consequently, it was determined that the water bottoms and side tanks would only be freed of sufficient water so that the vessel as she rested on the bottom would have a dead weight of 1,000 to 1,400 tons. In order to lift this amount of weight 50 sheaves were affixed to the gunwale bar on each side of the “Humphrey’s” deck with a like number of sheaves placed on each side of the barge “Maitland”. The “Maitland” had a carrying or lifting capacity of approximately 4,000 tons. Four cables were reaved through these blocks, two on each side of the vessel, one end of each cable running to a steam winch on the deck of the barge. The barge would then be partly filled with water and sunk to her usual load line, the cables then pulled up tight and the water pumped out of the barge. This operation would lift the “Humphrey” about six to eight feet.

In the middle of May, 1944, Captain Roen moved his equipment to the scene of the wreck and proceeded with the aid of numerous divers, skilled engineers and mechanics to prepare for the raising. Of course, innumerable difficulties were met such as swift treacherous water currents. All were successfully solved and about the 1st of August, 1944, the barge “Maitland No. 1” was placed over the “Humphrey”, cables attached, the barge sunk, the cables pulled tight and the water pumped from the barge.

This, of course, was the critical moment because at that time, if ever, the suction...
would cause the difficulty. In order to have eliminated it to the greatest extent possible, a ditch had been dug along the sides of the “Humphrey”. Experiments with the model in the tank had demonstrated that a large percentage of the suction could in this way be removed.

The first lift which amounted to some six or seven feet went off successfully and both vessels were towed by tugs “John Roen” and “John Roen III” into shallower water. The operation was repeated until it was impossible to sink the “Maitland” without striking the deck of the “Humphrey”. When this point was reached, two barges, the “Hilda” and “Maitland”, were placed alongside, one with sheaves on her starboard side, and one with sheaves on her port side, and the “Humphrey” was raised in a similar fashion between them until her decks were awash. On bad moment came when too much air was pumped into the portside, and that side of the “Humphrey” rolled to the surface threatening to turn the ship over. By the quick thinking and excellent marksmanship of Ben Froland, master of the “Maitland”, a rifle shot severing a main airline saved the ship from bending 12-inch eye beams. Pressure from this damage extended all the way down into the engine room, breaking most of the piping and bending 12-inch eye beams.

On Sunday, September 18, 1944, the “Humphrey” arrived at Sturgeon Bay, Wisconsin, in tow of the tug “John Roen III” amid the cheers of a great crowd of friends and well wishers of Capt. Roen. The U.S. Government, as a consequence of the satisfactory completion of the contract to raise the “George M. Humphrey”, transferred title in the vessel to John Roen, by a Bill of Sale dated September 18, 1944. The success of this remarkable salvage job stands unparalleled in the annals of the Great Lakes and brought Capt. Roen instant fame as the best salvageman on the Lakes, international recognition, and featured articles in such magazines as Changing Times, Popular Mechanics, Time, and many others.

The big job after the arrival of the vessel at Sturgeon Bay was to prepare for her rehabilitation. An estimate was secured from Manitowoc Shipbuilding Company but of course since Capt. Roen was half owner of the Sturgeon Bay Shipbuilding & Dry Dock Company, the job was given to the local yard. The Manitowoc estimate, which follows, was valuable in that it itemized the many items to be considered, and certainly gave an approximation, of the rebuild cost would be.

The Roen Transportation Company, a Delaware corporation, was set up for the purpose of owning the vessel and Capt. Roen transferred her ownership to this corporation which was to restore her and hopefully return her to service. The transfer was effected Dec. 22, 1944.

The services of Sparkman D. Foster were of inestimable value at this time in setting up the Corporation, obtained a Certificate of Necessity so as to be able to secure materials and items of equipment which were hard to get because of the war time demand, preparation of the Ship’s mortgage and many other legal matters, and later on to assist with her final disposition. Being an Admiralty attorney of great ability, he was respected in all marine circles, and gave us an entree to the large shipping Companies who would be prospective purchasers or users of the vessel.

After her arrival at Sturgeon Bay, Capt. Roen had the “Humphrey” towed to Manitowoc where she was placed in dry dock for the purpose of bottom inspection, to ascertain what damage the bottom may have sustained as the result of the sinking. Her bottom was found to be in excellent condition, likewise her propeller, rudder, shoe and pintle were undamaged. Her cabins were complete wrecks. There was some damage to the hatch coamings caused by the clamshells as the iron ore cargo was being removed. There was of course the hole approximately 18’ x 22’ in the vessel’s side arising out of the collision. Extensive damage to her wiring, piping and machinery had also occurred. It was estimated that rehabilitation could be accomplished during the winter of 1944-1945 for between $400,000 and $500,000 and that she could be ready for work by April 16, 1945.

The Sturgeon Bay Shipbuilding & Dry Dock Company gave a firm figure of $437, 100 to restore the vessel. Capt. Roen ordered the work to proceed while at the same time he was arranging...
...Roen Steamship Company: The Way It Was, 1909-1976

to borrow money from the Bank of Sturgeon Bay and the Charlevoix County State Bank to finance the work.

While the work of rehabilitating the vessel was proceeding, the decision of whether to sell the boat or operate her had to be made. It was here that Sparkman Foster’s acquaintance with officials of many big companies was to be of great assistance and he and Capt. Roen went to Cleveland and met with several ship operators to see what could be done. They met with Henry Steinbrenner or the Kinsman Transit Company, the owner of the “Humphrey” when she sank, and offered the vessel ready to go to work for $850,000. They also approached the Midland Steamship Lines, Bethlehem Transportation Company, Pittsburgh Steamship Company, Cleveland-Cliffs Iron, M.A. Hanna, Hutchinson & Company, Jones & Laughlin Steel Company, Shenango Furnace, Columbia, and Boland & Cornelius. None of them were interested in purchasing the “Humphrey” at the price of $850,000. As a matter of fact, we did not get any upbound cargos at all, coal or otherwise, nor did we get to go to the choice docks. However, we did operate and the boat made some money and laid up in Buffalo with a storage cargo of wheat.

A cost summary taken from 1945 records, follows:

The Certificate of War Necessity was useful in permitting a company to take depreciation on a vessel over a period of 60 months rather than the estimated life of the boat. There was a considerable amount of haggling over this, and Sparks Foster was very much involved. Also, at the time wages were frozen, and any increase of wages, (in fact all wages), had to be approved by the War Stabilization Board, and Foster’s office was very much involved in these affairs as well.

The amount borrowed by Roen Transportation was $400,000 and although Charlevoix County State Bank was actually the ship’s mortgagee, the outstanding loan was guaranteed up to a certain percentage by the Reconstruction Finance Corporation. Date of the loan was March 29, 1945 take in the name of Roen Transportation Company and the funds were used primarily to pay off the Sturgeon Bay Shipbuilding and Dry Dock Company for its work.

The operations of the Str. “Capt. John Roen” showed very little profit under the management arrangements which we had with the Hutchinson Company. Therefore, in the very early spring of 1946, negotiations were commenced which culminated in a “bare boat” charter of the steamer to the Interstate Steamship Company, a subsidiary of Jones & Laughlin Steel Corporation. Mr. Paul Tietjen was the gentleman with whom we negotiated. The charter commenced May 1, 1946 and was for one year. Under this charter, the Interstate Steamship Company was to pay all costs of maintenance and operation after they accepted the vessel. The Roen Transportation Company was to receive the sum of $60,000 for the season of 1946 in charter hire. If profits for the season exceeded $60,000, we were to get one-half of such profit. This proved to be a much better agreement, profit-wise, than the one we had had with Hutchinson in the previous year. At the close of the season Interstate Steamship Company sent us a check in the amount of $43,879 as our half of the net profits over and above the 60,000 dollars.

The year we operated the Steamer with Hutchinson managing her and the year that the vessel was under charter to Interstate Steamship Company taught us that we knew very little about the ore and coal trade for a bulker. Whereas the vessels of the larger fleets invariably got several cargoes of coal to go up to Lake Superior, the Str. “Capt. John Roen” never got one and always had to run upbound light.

Continued on page 16...
Welcome to Our New Director of Collections!

By Tiffany Charles

Born and raised in Chicago, I have long loved the city’s industrial culture and history. While studying American History at DePaul University, I began working in the Chicago Historical Society’s bookstore. I knew I wanted a career in the museum field, but had difficulty articulating my area of interest. During a tour for new staff, we were taken to Collections Storage where an employee was wearing gloves and handling an artifact from the Great Chicago Fire. I was told he was a Collections Manager. I was so thrilled to watch him work with this material culture, this physical representation of Chicago history. I had a name to the profession I would pursue: Collections Management.

I interned in Collections while working part-time in two other departments. Being at the museum seven days a week, some said they should just set up a cot for me in the storage area! The dedication paid off though, and shortly after graduating I was hired as a full-time Collections Technician working with the Decorative and Industrial Arts. Since then, I have worked at several well-known Chicago institutions including the Frank Lloyd Preservation Trust, the Field Museum, and as the Head of Collections and Registration at the DuSable Museum of African American History. During my tenure at Chicago’s Museum of Science and Industry, I was fortunate to meet an archeologist who offered me a spot on her excavation of the site of the World’s Columbian Exposition of 1893. My love of archaeology was born.

While I was delighted to literally dig up history, I had a real passion for the social and architectural history of passenger vessels and ocean liners. In 2010, I left the U.S. to pursue a Master’s Degree in Maritime Archaeology and History from the University of Bristol in the UK. Upon my return, I worked a few more years in Chicago before moving to New Orleans to take on the role of Collections Manager at The National WWII Museum. New Orleans is a magical city that teems with life. Just about the only thing that could lure me away would be a collections position at a maritime museum – bringing together my dedication to collections care with my passion for maritime history and archaeology. And here I am, thrilled to be back in the Midwest as Director of Collections at the Wisconsin Maritime Museum. Keep an eye out for updates as the Museum embarks on the grant-funded Collections Storage Planning Initiative!

Tiffany Charles is the Director of Collections at the Wisconsin Maritime Museum. She can be reached at (920) 684-0218 x111 or tcharles@wisconsinmaritime.org.
It’s not uncommon in the summer for a tour guide to give 4-5 tours a day. They go through the same speech and answer many of the same questions and meet people from all over the world. But, every once in a while, they meet someone that has a unique story and these are the people that you don’t easily forget. Here are a few of those “moments” that have stuck with the tour guides and why we take so much pride in offering guided tours of Cobia.

“A few years ago I had an elderly gentleman on a tour wearing a patch from the 82nd Airborne. I asked him if he jumped out of perfectly good airplanes. He told me that he worked at the shipyard on subs while he went to high school. After graduation he tried to join the Navy to serve on a sub but the recruiter told him he was not right for it so he joined the army and then the Airborne. The last plane he jumped out of was during the Normandy invasion. He was with the men dropped in the wrong place behind German lines and they fought their way back to join up with the invasion forces.”

“A man on my tour had a cap that had a cruiser on it and the name Indianapolis. On the back of the cap was a star and in red letters “Survivor.” He was one of the men who floated in shark infested waters waiting for rescue. He insisted that he was not a hero. He said all he did was survive. He added that if you really want to talk about something ask him about his grandchildren.”

“I met an older couple (Mom and son) out in the parking lot one afternoon. The gentlemen told me that his mom in her late teens had a boyfriend on USS Lagarto! The couple wanted the museum’s help in trying to find out if her boyfriend was still alive. It seems that right before Lagarto left Manitowoc, he had come down with appendicitis. She said one of the strongest memories was seeing him standing at the end of the south pier watching his boat and shipmates leave without him. As with so many wartime romances, they drifted apart and I guess we’ll never know if he found out about Lagarto’s loss, or being found, and his feelings about everything that happened.”

“I met an older gentleman wearing National WWII Sub Vets T – shirts. He told me that he had gotten his dolphins from his dad which made them extra special. His dad started out in the old “Sugar” boats (S - class) and his last boat was USS Bullhead. Bullhead was the last U.S. sub lost in WWII (Aug. 6, 1945), so how could his son tell me about him? It seems that his dad had just gotten back from R & R and missed when she weighed anchor. He was told that he’d be put to work till she came back, which she never did.”

“A lady’s father served on a WWII sub, and now in her senior years, she wished he would have talked about what it was like to be in the Navy on a submarine during this historical period. What goes on during a war patrol and what was life like for him? How did his sub service or experience during the war shape his life afterwards? That part of his young life was a big blank in her family story. Chatting in the aft torpedo room she opened up and expressed how much the tour truly meant to her, as it answered many questions she had as to what his life was like during WWII, and additional understanding of her wonderful father.”

USS Cobia also often touches many who don’t have a submarine connection.

“A gentleman on one of my tours was a helicopter pilot in Vietnam, who related to Cobia’s rescue of the downed airman and the determination and risk WWII submarines would often take to get them. After the tour when he opened up a little about that part of his life, another gentleman nearby heard him and with heartfelt emotion thanked him for flying through enemy gunfire to rescue men like himself, on the ground who were under attack. Even though these two men did not previously know each other, they were instantly brothers from their Vietnam experience and their exchange was emotional, and meaningful beyond words.”

Sharing these stories gives life to the history that these great people lived and allows for it to continue to live for generations to come. Thus, fulfilling part of our greater mission in giving tours on the Cobia to help continue these stories through the oral storytelling tradition by both tour guides and guests.

Karen Duvalle is the Submarine Curator at the Wisconsin Maritime Museum. She can be reached at (920) 684-0218 x 105 or kduvalle@wisconsinmaritime.org.
I truly believe that ‘museums are for everyone’. My focus as an educator, and as the Education Director at the Wisconsin Maritime Museum, has been to invite everyone to learn together. Museums, with their hands-on exhibits, educational programs and artifacts, can create experiences unlike any other. I love how fluid learning can be in museums; I learn just as much from students as they learn from me. Historically, museums haven’t been for everyone. They have a history of being for only the most privileged among us. This has left people with disabilities, people of color and any ‘others’ out of the conversation and out of the building. Today, the museum world is working hard to right the wrongs of the past. As the Wisconsin Maritime Museum nears its 50th Anniversary (next year!), we want to be more intentional about including everyone.

This summer, I’m proud to have received the Kennedy Center’s Leadership Exchange in Arts and Disability Emerging Leader Award for my work in museum accessibility. In that spirit, you’ll see some new offerings on your next visit to the Museum. We are in the final stages of creating our new Sensory Backpacks, for sailors of all abilities. These backpacks, meant to make the museum more sensory-friendly, will have noise-reducing headphones, a communication book, a social story and fidget toys in them. They will be free to check-out at the front desk.

Several generous benefactors have donated money to create the All Hands on Deck Fund, a scholarship fund to make education accessible for all learners with a focus on groups that have been underserved in Wisconsin. Schools can now apply to the Fund for bus transportation money and students can apply to cover program, museum visit and research costs.

We are also working hard to create programs that appeal to people of many backgrounds. Our Fall Events has a suite of programming including yoga on the rooftop, movie screenings, an author lecture and book signing, an after-hours Ice Age presentation at the Sub Pub, a Wisconsin Science Festival event and a kickoff for our book club in partnership with the University of Wisconsin’s Go Big Read.
Welcome New Members As of October 5th, 2018

John & Lorrie Beimborn  LeeAnn Gauthier  Philip Klintworth  John Panos
Bob & Tricia Dewane  Joseph Geniesse  Stephanie Malaney  Jeremy Salentine
Cheryl Fisher  Michael Good  Jenny Moffitt  Steve & Cindee Schuetz
Bill French  Cynthia Hardow  Josh & Katie Mrotek  Julie Sommers
Matthew Fure  Theresa Kittilson  Darren Nichols  Jude Toche
Melissa Gallagher

Corporate Fleet, Fall 2018

SCHOONER ($2,500+)
Shoreline Credit Union

MACKINAW ($1,000+)
A.C.E. Building Service, Inc.
B & B Metals Processing
Bank First National
Burger Boat Company
City Centre, LLC
Dowco, Inc.
Federal-Mogul Corp.
Hamann Construction Company
Hein Plumbing
Lakeside Foods
Manitowoc Marina
Schenck SC
Steimle Birschbach, LLC

CUTTER ($500+)
Burbey CPA, LLC
Carron Net Company, Inc.
Heresite Protective Coatings, LLC
Kahlenberg Industries
Manitowoc Grey Iron Foundry, Inc.
McMullen & Pitz Construction Company
Red Arrow Products, a Kerry Company
Schaus Roofing & Mechanical Contractors
The Leede Research Co., Inc.
UnitedOne Credit Union

KAYAK ($250+)
Brian’s Smokehouse & BBQ, LLC
Broken Plate Catering
*Late’s BBQ
Michael Best & Friedrich, LLP
The Smiling Moose
Saloon & Grill
Wrap It Up, LLC

*Thank you to our new Corporate Fleet members!

Support Students!

The All Hands on Deck Fund supports underserved groups accessing and engaging with maritime history at the Wisconsin Maritime Museum. Funding can subsidize transportation costs, program fees and admission to the Museum for students of all ages and abilities.

Your donations today will go directly to the All Hands on Deck and support student engagement with our waterways.
Coming Events

**Saturday Learning Series: The Salvaging of the Alvin Clark - Nov 3, 2018 - 11am to 12pm**
$5/person, free for members. A presentation by Dr. Richard Boyd, one of the divers involved in the original project of raising the schooner Alvin Clark also known as the Mystery Ship of Green Bay.

**Girl Scout Brownies Love Water Day: Fall 2018 - Saturday, Nov 3, 2018 - 9:30am to 12pm or 1pm to 3:30pm**
Discover the wonders of water! Learn how water connects people all over the world. Be inspired to lead your family and friends as water advocates. Games + Experiments + Snacks + Role playing + Time on a real submarine = FUN These activities will help fulfill your “Love Water” Award requirements! Space is limited to 40 Brownies, so call right away to register: 920-374-4004

**Smithsonian Saturdays - Nov 3, 17 & 24, 2018 - 10am to 11am**
The Wisconsin Maritime Museum, a Smithsonian Affiliate, presents Smithsonian Saturdays. Visitors are invited to enjoy a screening of a Smithsonian Channel documentary on select dates. Included with admission.

**Share Your Voice: Help Create a New Wisconsin History Museum - Nov 8, 2018 - 5:30pm to 7pm**
Be the first to see the design concepts for a new Wisconsin history museum! Share your thoughts and ideas with the Wisconsin Historical Society as we seek to create a modern, state-of-the-art history museum on Wisconsin’s capitol square. A new Wisconsin history museum will connect and tell the story of all Wisconsinites, and now is the time to share your voice and be a part of this rare opportunity to celebrate and honor our state. The session is free and open to the public. Advance registration is preferred. Visit wihist.org/yourvoice to RSVP today!

**Veterans’ Day Movie Screening: War Beneath the Waves - Nov 10, 2018**
Included with Admission, Free for Members and Veterans

**USS Cobia Amateur Radio Club Event -Saturday & Sunday, Nov 10-11, 2018**
Local amateur radio operators will set up and operate radio equipment in the crew’s mess aboard Cobia and talk to people around the world in honor of Veteran’s Day. Members of the Museum and the Radio Club consider it a distinct honor and a privilege to participate in this annual event. Visitors can see and talk with Amateur Radio Club NB9QV members on board the submarine this weekend!

**Dialogue: Building Anti-Racist Educators - Nov 17, 2018 - 9:30am to 11am**
Join the Wisconsin Maritime Museum as we begin a three-part series on Building Anti-Racist Educators (BARE). Meant for both educators and general public alike, these facilitated dialogues will focus on addressing inequity, bias and racism in our education system. Free facilitated discussions.

**USS Cobia Nook & Cranny Tour Dates!**
This is a behind the scenes look at a World War II submarine. These smaller tours will last approximately three hours and will give guests a chance to see areas of the submarine not seen on normal tours. This special tour will include ladders and smaller spaces and you must be 16 or older to participate. The cost is $15 per person, plus regular admission for non-members. A free bottle of Torpedo Juice (non-alcoholic) is included for a mid-tour break in the Crew’s Mess. Space is limited so reservations are required. To make reservations or for more information call Mike at (920) 684-0218 ext 106.

**Tour Dates: Tours are held on select dates in November through February.**

**Winter 2018-2019 season, Sundays at 1pm**

- November 4th  
- November 18th  
- December 9th

- January 20th  
- February 10th  
- February 24th

Visit www.wisconsinmaritime.org/special-events/ for updates on all of our activities.