



# The Anchor

WISCONSIN MARITIME MUSEUM

*The Quarterly Magazine of Wisconsin Maritime History*

Winter 2018



*Improving Wisconsin's Inland Waterways*





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## The Pilothouse



One of the most rewarding aspects of museum work has to do with the people we get a chance to interact with in the course of our day; from students and teachers to families on vacation to veterans, academics and others supporting our mission. These individuals and groups, along with our steadfast members, bring context and perspective to the important work we are engaged in as an accredited museum. But of course, it's the people we work with on a daily basis, i.e. our colleagues on staff, who often make the biggest impact on our professional lives.

Here at the Wisconsin Maritime Museum, we are fortunate to have attracted many capable and passionate individuals over our 49-year history. So it gives me great pleasure in sharing with you the recent addition of Cathy Green to our staff. Cathy's stellar career as a maritime archaeologist and historian, museum educator and grant program officer will now have a new chapter here at the Museum, where she is assuming a key leadership role as our Deputy Director and Chief Curator. Along with leading our curatorial and collections efforts, Cathy joins us in time to help the museum prepare for our 50th anniversary in 2019 while also helping to lay out plans for our next 50 years of service to the communities we benefit.

Increasing the talent pool we need to draw on goes beyond museum staff and also includes those willing to serve as volunteer members of the museum's board of directors. Museums nationally are struggling through many financial and governance issues as reflected in recent news articles and in professional publications for our industry. This reinforces the importance of the strategic work we are engaged in while continuing to deliver quality, content-rich museum experiences to our visitors. Your support as members and patrons, which remains critical to our long-term success, makes me optimistic about our museum's future. There will be much more to share as we define and execute these plans. So stay tuned: the next few years will be exciting!

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Comments and suggestions regarding *The Anchor* may be directed to the editor at 920-684-0218 or e-mail: [editor@wisconsinmaritime.org](mailto:editor@wisconsinmaritime.org). The submission of articles and other material for publication is welcomed. Copyright 2018 by the Wisconsin Maritime Museum. *The Anchor* is designed by Freelance Artist, Sarah Tuma and printed by Fricke Printing Service, Inc., Manitowoc, Wisconsin.

The Wisconsin Maritime Museum is a private non-profit organization located in Manitowoc, WI, founded in 1968 as the Manitowoc Submarine Memorial Association, Inc., the Museum is dedicated to the preservation and interpretation of local, state and regional maritime history.

The Museum has a membership program and distributes *The Anchor* quarterly to its membership. Other membership benefits include; unlimited free admission to the Museum and USS *Cobia*, discounts for purchases in the Museum Store, research services, and special events.

Accredited by the American Alliance of Museums, the Wisconsin Maritime Museum is also a member of the Association of Midwest Museums, Wisconsin Federation of Museums, Association for Great Lakes Maritime History, Council of American Maritime Museums, International Congress of Maritime Museums, Historic Naval Ships Association, and the American Association for State and Local History, and is a Smithsonian Affiliate.



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### **Future Submission Deadlines:**

Spring 2018 - February 23rd

Summer 2018 - May 4th

*The Anchor* is published quarterly by the Wisconsin Maritime Museum. A target length for scholarly articles is between 2,000-3,500 words, not including endnotes, photographs and tables. Chicago Manual of Style 16th Edition citation guidelines are preferred for all works.

Questions and submissions can be directed to Co-Editor, Lisa Pike at [editor@wisconsinmaritime.org](mailto:editor@wisconsinmaritime.org).

**On the Cover:** Five yachts and a row boat on the Fox River at the Cedar Lock and Dam in Kimberly, Wisconsin in the fall of 1935. [WMM Collections, P82-37-11-67D]



### **The Manifest** Quarterly Book Reviews By Lisa Pike



### **Schooner Days: Wisconsin's Flagship and the Rebirth of Discovery World** By Frank L. Steeves & Christopher Winters

The photographic essay book, *Schooner Days* by Frank L. Steeves and Christopher Winters is a work of great narrative and visual value showcasing the state of Wisconsin's historic flagship and floating scientific lab, the schooner *S/V Denis Sullivan*. Steeves' narrative text coincides with the beautiful full color, full-page photographs by Winters and through both they relate to the reader the story of the rebirth of Milwaukee's Discovery World Museum in connection to the construction, launch, and first ten years of sailing the schooner *Denis Sullivan*.

Steeves provides the reader with a firsthand account of the efforts put forth to build the first tall ship in Wisconsin in over one hundred years. He was initially involved with the project as its first chairman and in many other capacities since, over the 25 years it took to bring the project to full fruition. He interlaces his story with a mix of historic documents such as original harbor charts and news articles about the first notions of building a traditional Great Lakes tall ship. These additional documents provide a detailed timeline for the reader and a total overview of the project from the choice to honor 19<sup>th</sup> century Great Lakes Captain Denis Sullivan by replicating his most famous vessel, the 1874 schooner *Moonlight*, to the first sailing of the modern vessel and its initial crew's voyage aboard her. Winters also documents with his camera the step-by-step construction of the *Sullivan* from the keel up giving the reader the opportunity to witness one of the more technical art forms of the Great Lakes, that of traditional shipbuilding.

Winters who won the 2017 Great Lakes Historian of the Year Award from the Marine Historical Society of Detroit for his years of stellar Great Lakes photo documentation is in top form with this marvelous tribute to local maritime heritage. The book overall is a journal of sorts kept by both Steeves and Winters during their 25-plus years of involvement with the *Sullivan* project. It entails all the setbacks and triumphs of the project as well as their witness to the resilience of the human spirit in the face of adversity. A spirit which is carried on through a beautiful schooner that now plies the waters off the coast of Milwaukee.

Available from Running Light Press at [www.runninglightpress.com](http://www.runninglightpress.com),  
238 pages, 2017, ISBN: 9780981476629

**Join us at our Annual Meeting on April 19  
when Chris Winters will be discussing his book!**

Lisa Pike is the Co-Editor of *The Anchor* and the Museum's Archives Assistant. She can be reached at (920) 684-0218 x113 or [editor@wisconsinmaritime.org](mailto:editor@wisconsinmaritime.org)



# Waterway Improvements in Early Wisconsin

By Dr. Richard Boyd

Early in the 19th century, most workaday transportation in the Midwest was by water. A swarm of sailing and steam vessels plied the Great Lakes, carrying cargoes of grain, coal, lumber, foodstuffs and travelers to and from eastern lake ports. Completion in 1829 of the Erie Canal, effectively connecting the Lakes via the Hudson River with the East Coast and Atlantic Ocean, greatly enhanced maritime activity. The remarkable success of the Erie Canal set off a wave of “canal mania,” which swept westward right into Wisconsin.



*Evolution of the Wisconsin and adjacent territories.*

In 1829, Wisconsin was still part of the Michigan Territory and remained so until 1836, when independent territorial status was achieved. Full statehood did not occur until 1848. Nonetheless, already in these early days, many coastal hamlets envisioned a thriving harbor at their townsite. This was especially true along the coast of lower Lake Michigan. In addition, Territorial Wisconsin encompassed over 15,000 lakes and 12,000 rivers, providing about 84,000 miles of waterways.

It was not lost on shrewd promoters

that some of these waterways could be interconnected for commercial purposes with significant financial rewards.

The improvement of harbors and river routes was not a routine matter of simply obtaining funds or lands from the territorial and federal governments. In truth, grants for these projects involved infamous political infighting, fiery clashes between promoters and detractors, and devious or painfully slow actions by governmental officials. As a typical example, petitions were pouring into the federal government by 1830 for funds to develop Lake Michigan ports at Milwaukee, Sheboygan, Manitowoc, Racine and Southport (Kenosha). These proposed tasks had to compete for funding with other projects, such as improvement of coastal southern ports, railroad expansion, and other maritime favorites, such as lighthouse construction. Between 1843 and 1845, the federal government incrementally dribbled the modest total sum of \$90,400 for developments at just three of the competing small ports. Competition for meaningful funding for harbor betterments went on for decades.

Native Americans for centuries had plied Wisconsin's intertwined river systems; they were even aware of the route to the Gulf of Mexico via the Wisconsin and Mississippi Rivers. Likewise, they regularly used the Fox River Waterway, which originated in central Wisconsin and flowed northeasterly to Lake Winnebago. From Winnebago, travelers could continue downstream to Green Bay, or travel north through several interconnected lakes up the Wolf River. By the 17th century, Indians, explorers, fur traders and settlers alike were using these extensive water highways.

Near the present-day town of Portage, Wisconsin a single overland trail linked the Fox River Complex with the Wisconsin River, which flows downstream to the Mississippi. Certain entrepreneurs of that day realized that a commercial canal across the portage could theoretically connect Green Bay to the Gulf of Mexico. Several promoters of this concept were prominent territorial and national figures, including Governor James Doty, Senator Nathaniel Talmadge, and Territorial Representative Morgan L. Martin. The first step might be constructing a channel between the Fox and Wisconsin Rivers, using this project as a springboard for further far-reaching developments.

## ...Waterway Improvements in Early Wisconsin

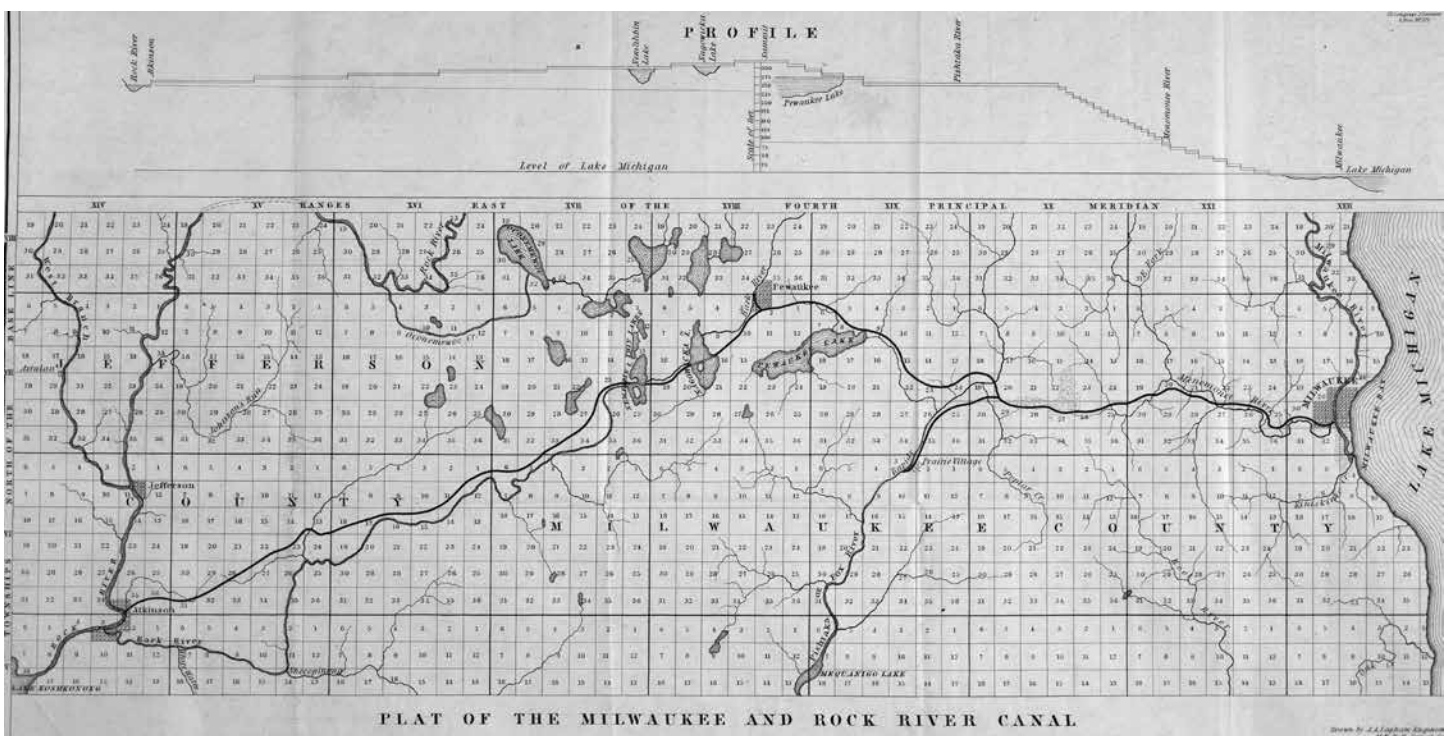
The Fox-Wisconsin River portage was a soggy uphill trail that was first described by Jesuit explorer Father Marquette as 2,700 paces (about two miles) through swampy muck. That was in 1673, yet work to build a canal did not begin until 1834. Besides a navigable channel, a pound lock might be needed because the elevation of the Fox is just slightly lower (three feet) than that of the Wisconsin. In fact, it was reported that in pioneer times the two rivers were sometimes connected when spring floodwaters would flow across the portage.

The Michigan Territorial Government in 1829 authorized formation of the Summit Portage Canal and Road Company, funded at \$50,000, and tasked with completing the waterway within five years. Daniel Whitney, a famous pioneer businessman in northeast Wisconsin, championed the project because he wanted a navigable river route to ship the lead shot he was producing near the Wisconsin River. Construction began and the company survived about eight years, but the canal was never finished. Digging a trench by hand through marshy mud for nearly two miles proved to be an overwhelming mission. Funding also proved to be inadequate, so the project stalled out by 1838. It would not be successfully completed until after the Civil War.

Another greatly hyped Wisconsin canal project suffered a political demise, as did others around the Midwest, sometimes nearly bankrupting the sponsors. Territorial Representative Byron Kilbourn of Milwaukee, Wisconsin spearheaded a group of entrepreneurs who wanted a canal that would connect the Milwaukee and Rock Rivers. Obviously, this waterway would bring significant commercial traffic into Milwaukee, where many of the promoters owned property or businesses.

Kilbourn's dream project met with some initial successes due to his position as a territorial delegate and because the territorial legislature, Governor Dodge, and the majority in the U.S. Congress were all Democrats, who viewed the undertaking favorably. His project also garnered strong support from a Milwaukee newspaper (the *Advertiser*). In 1838, Dodge signed a territorial act creating a "canal company" capitalized at \$100,000, with an option to increase that amount to \$1,000,000, and having total control to select the waterway's route. A stipulation mandated that construction must originate in Milwaukee and be completed within 10 years.

Kilbourn, president of the newly formed company, promptly sought a land grant from the federal government for the canal's route, as well as



Original plat map showing the proposed route for the Milwaukee and Rock River Canal.

Continued on page 6...



## ...Waterway Improvements in Early Wisconsin

additional financial support. To show good faith, Kilbourn's group began work by building a dam on the Milwaukee River with a canal ditch nearby. By the end of 1838, the U.S. Congress granted about 140,000 acres of property for the canal, stipulated to sell at \$1.25 an acre. The following year, the territorial legislature passed a law allowing the company to issue \$50,000 of territorial bonds at 6% interest and to establish a three-man Board of Canal Commissioners to oversee the project. At this point, everything was going well for the Milwaukee and Rock River Canal Company. There was a caveat in this arrangement, however; revenues to pay for the construction work and supplies had to come from associated land sales, not from territorial coffers.

Soon this grandiose improvement scheme began to unravel. Congress mandated that the land would be granted to the Territory, not directly to the canal company; thus the territorial bureaucracy became responsible for land disposition. This in effect

restricted freewheeling financial transactions by the company. In addition, several influential Milwaukee businessmen protested the selected route for the canal, delaying productive construction by a full year. Finally, the crippling effects of the national Financial Panic of 1837 strangled the cash flow for the project. Land sales along the canal route, postulated to raise a fortune, fell far short of the revenue needed to continue survey and construction work.

The final indignities came in the early 1840s, when new President Tyler appointed James Doty as territorial governor, replacing Henry Dodge. Doty was a vowed enemy of certain "canal promoters" and the project itself as proposed. He promptly refused to recognize the present Canal Commission that had been handpicked by Kilbourn and Dodge. He instead appointed a new board consisting of Milwaukee capitalists and railroad-men that were generally skeptical of the waterway. Lastly, he revoked Kilbourn's power to sell territorial bonds. By late

1842, the Milwaukee and Rock River Canal Project had been politically harassed to death.

Now the only waterway project with popular support was the Wisconsin – Fox Rivers. Execution of the project immediately became a "political football," with promoters and detractors offering competing plans. Basically, one side wanted the project to be mostly government-controlled and owned, whereas the other side insisted that private enterprise should be the major player. Local support for the project was widespread and even came from faraway places. A citizens group from Buffalo, New York, petitioned for the project, envisioning it as a westward extension of the Erie Canal, effectively connecting it to the Gulf of Mexico!



Remnant of the Milwaukee and Rock River Canal near Milwaukee, WI, ca. 1860.

## ...Waterway Improvements in Early Wisconsin

Creation of a navigable system extending from Green Bay to the Mississippi River would be an enormously difficult and expensive task, involving 280 miles of rivers and lakes. The Upper Fox was a fairly narrow, meandering, shallow stream, with a modest downgrade. From Portage to Oshkosh, a distance of 106 miles, the river only dropped 35 feet. Surveys indicated that a few strategic locks could compensate for the elevation changes, and regular dredging would keep channels navigable, although rapid siltation and shifting sand bars might be a problem. In the end game, colossal dredging expenses would be the downfall of the entire upper river system.

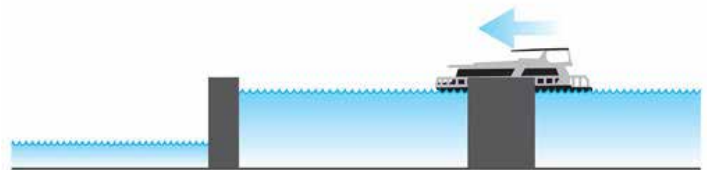
The Lower Fox River downstream from Lake Winnebago was a torrent of waterfalls and rapids; an extensive series of locks would be required to bypass these turbulent waters and compensate for changes in elevation. This portion of the river falls almost 180 feet in a mere 39 miles; locks alone would not tame the river. Many dams would also be needed, which would cause waters to back up, forming huge pools that would allow navigation in areas usually too turbulent or shallow for safe vessel passage. For example, the Winnebago Pool, created by dams at the lake's outlet, formed a large navigable basin that reached northward to the Wolf River by connecting Lakes Butte des Morts, Poygan, and Winneconne with deeper water.

At this point, an explanation of "lock systems" seems appropriate, since a significant number of them would be needed along the Fox Waterway. A "pound" river lock is a simple watertight chamber with massive gates on both ends of the containment. The Fox River Locks all operate on a simple gravity feed procedure: If a craft was headed downstream, it enters the lock chamber (i.e. the pound or level), and the water is vented, lowering the vessel in the process. Heading upstream, a vessel is simply gated into the chamber and water from the higher, upstream river is decanted into the chamber, raising the boat to the level of the upper river. The water flow in and out of the lock is controlled by "paddle or lift valves" built into the gate itself and operated by a manual crank. Also, some pounds can be filled or emptied via a bypass channel or sluice controlled by large, gravity-fed valves.

Locks are not a modern invention, but rather date to about A.D. 1,000 when the Chinese used them

regularly. Depending on the engineering specifications and size of the vessels to be handled, a pound lock might raise or lower a boat anywhere from 5 to 50 feet at a time, taking 15 minutes to several hours to do so. Each Fox River lock has a lift of about 10 feet, taking about 15 minutes.

### DOWNSTREAM - LOCK OPERATION



Upstream gates open as a vessel enters the lock chamber



Upstream gates closed  
Water is released downstream through butterfly valves  
Water in lock chamber lowers



When water levels are equal downstream gates open

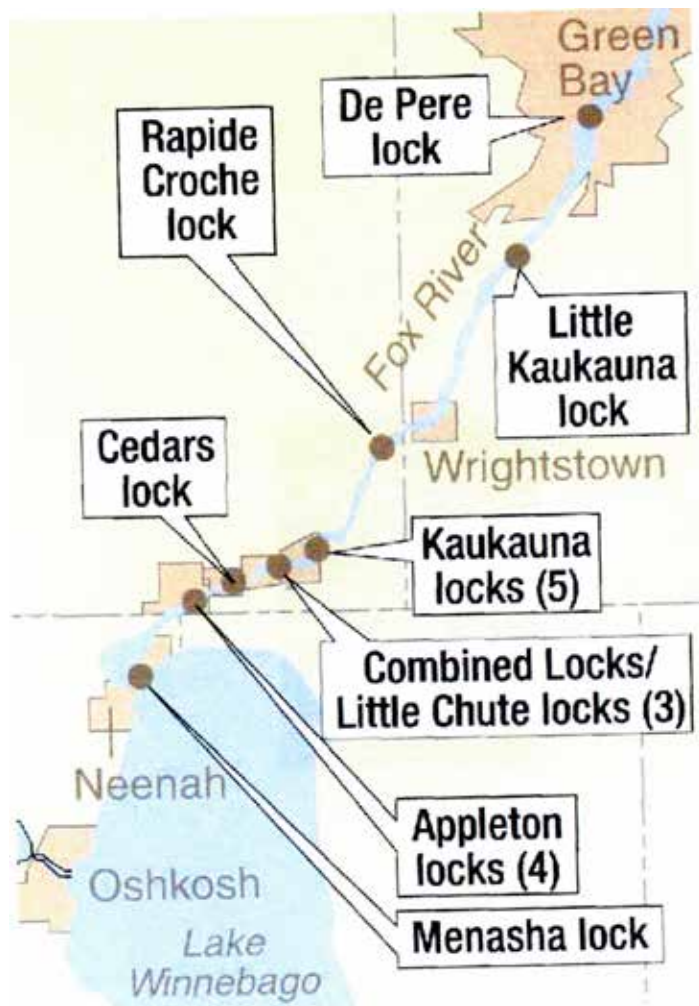
Diagram of a pound lock lowering a vessel traveling downstream.

In the 1830s, the U.S. Army Corps of Engineers conducted a study of the proposed river route to Green Bay. By 1839, they sanctioned a lock, canal, and dam system, thought to cost nearly \$450,000, an estimate which would eventually prove to be woefully wrong. It was to be constructed by several private companies, including the Summit Portage Company, the Fox and Wisconsin Improvement Company, and the Green Bay and Mississippi Canal Company. Congress finally passed a land grant for the waterway in 1846. The Corps of Engineers was initially designated as project overseer, but that duty passed to the State in 1848. In general, State supervision led to frequent political infighting, insufficient funding, and slowed construction.

*Continued on page 8...*



## ...Waterway Improvements in Early Wisconsin



*The Heritage Waterway from Lake Winnebago to Green Bay with its 17 locks.*

As previously discussed, the Portage Canal to connect the Upper Fox and Wisconsin Rivers had failed in the late 1830s, so the new contractor selected a different route for the channel. Misunderstandings erupted between this contractor and the State, so the work was transferred to the Fox and Wisconsin Improvement Company and finally to the State. A crude channel was completed by 1851, but was said to be of shoddy construction and unsuitable for heavy commercial traffic. Cost of this project now totaled about \$70,000.

The U.S. Enabling Act of 1870 passed responsibility for completing and maintaining the entire system to the Corps of Engineers. Curiously, work was motivated by a hangover from Civil War days: Canada had been confrontational and strongly supported the Confederacy; perhaps some future altercation might require gunboats to be quickly moved into the Great Lakes and certain northern rivers. The Corps moved

swiftly, rebuilding the Portage Channel by 1874, and adding a pound lock at Fort Winnebago. This particular lock was 140 feet long by 43 feet wide, which was to become standard throughout the entire system. The completed canal was 2.5 miles long, 75 feet wide, with a depth of seven feet.

The Upper Fox River had a very low downgrade, so initially only channel dredging was required. Soon dredging alone proved inadequate, so seven locks were built, each with a lift of about seven feet and built to the standard size previously described. By the late 1850s, passage from the Mississippi to Lake Winnebago (225 miles) was possible in a navigable channel ranging from three to seven feet deep. Unfortunately, it was also painfully obvious that frequent and costly dredging would be needed to keep the system functional.

Taming the Lower Fox River was a far greater engineering challenge. Leaving Lake Winnebago, the riverbed dropped 180 feet in a series of rapids and falls, collectively the height of Niagara Falls. At Kaukauna, Wisconsin alone, it fell 59 feet in only a short distance. Initial survey work had begun in the 1840s, using private, territorial and State funds. In 1850, contracts were awarded to several firms, including Morgan L. Martin's Fox-Wisconsin Improvement Company, which was to build the seven locks at Little Chute and Kaukauna.



*Steamboat Henrietta "locking through" at Kaukauna's First Lock ca. 1890.*

Interestingly, Morgan's group offered to fund the work itself, with payback coming through anticipated tolls and land sales. Instead, the State created a special scrip at 12% interest to pay Morgan for the work, Martin organized several work groups to build the key dams, locks, and canals. At Kaukauna, he rented buildings

*Continued on page 9...*



## ...Waterway Improvements in Early Wisconsin

from fur trader Charles A. Grignon for his office headquarters and bunkhouse accommodations for his workmen. So much manpower was required that he advertised for European laborers, which created a significant influx of immigrants to the Fox River Valley. Dutch, German, and Irish workers from the project founded or settled several local towns, such as Little Chute, Holland, Wrightstown, and Dundas.

Despite valiant efforts, the company failed, the job having proved too massive, cash flow too paltry, and contractual deadlines unobtainable. At this point, the whole river improvement project was taken over by the federal government as a result of the Enabling Act of 1870. The government had to buy or pay off the failed contractors for materials and wages they had expended, which led to years of litigation. Morgan's bankrupt Fox-Wisconsin Improvement Company was reorganized as the Green Bay and Mississippi Canal Company, mostly with out-of-state investors. It shrewdly sold the navigational and maintenance rights to the federal government, while retaining valuable waterpower rights. Morgan L. Martin was excluded

from the new company and never fully recovered from the financial loss.

In summer of 1856, the shallow-draft paddle-wheeler *Aquila* had cruised from the Mississippi up the Wisconsin River and through the Fox River Waterway to Green Bay, the first vessel to do so! The steamboat's passage was met with huge celebrations in "river towns" along the route with crowds of cheering spectators and marching bands. Notably, the *Aquila's* voyage had been at a time of unusually high water; it's unlikely that it would have succeeded with normal water levels, but it heightened general support for the Improvement Project. The Fox River Waterway finally became fully operational in 1874, managed by the Corps of Engineers, and consisting of 22 locks, 11 dams, and nearly eight miles of canals.

Unfortunately, the system was no sooner functional than it was plagued by a myriad of problems. The railroads had arrived at many major Wisconsin towns, robbing the waterway of much anticipated commercial traffic. Overland travel was possible all year, whereas the waterway was frozen over for a significant period.



Steamer *Aquila* in Lake Winnebago ca. 1856.



## ...Waterway Improvements in Early Wisconsin

A rival waterway, the Illinois and Mississippi Canal, completed in 1848, siphoned off much maritime shipping headed south via the Mississippi River. Keeping the river channels open demanded far more expensive dredging than anticipated, especially in the Upper Fox and Wisconsin Rivers. So severe were these “maintenance problems,” that the Wisconsin River portion of the system was abandoned in 1886, ending the dream of routine navigation from Green Bay to the Gulf of Mexico. The lock at Portage was sealed and the one at Fort Winnebago was bulldozed. All boat traffic, other than some pleasure craft, essentially ceased by 1950 after the Corps closed the Upper River portion of the system.

Navigation along the Lower Fox was a somewhat different story. Passenger and packet steamboats, mail-boats, excursion vessels, personal yachts and small craft plied these waters well into the 1930s.

At its peak, commercial tonnage ranged from 150,000 tons to twice that amount. Nevertheless, the discussed problems eventually caught up with the Lower Fox, and the lock system went into “storage status” by 1983. Lock gates were inactivated by 1987, the canals drained, and the lock at Rapide Croche below Kaukauna was permanently sealed to prevent the migration of invasive species into the Lake Winnebago Basin. Local pleasure boating continued at many places, but was now confined between a series of closed locks.





## ...Waterway Improvements in Early Wisconsin

But this was not “end of story.” Although the Fox-Wisconsin Waterway was in “caretaker status” by the 1990s, ownership now passed back to the State, and a Governor’s Task Force was formed to deliberate the fate of the aging system. The Upper Fox System was allowed to revert to its natural status, supervised by the State DNR. Only the lock at Eureka, Wisconsin remained operational to allow pleasure boat traffic into Lake Winnebago. Most of the locks on the Lower Fox remained inactivated.

The historic importance of the locks and the associated canals did not go unnoticed. The Portage Canal was placed on the National and State Registers of Historic Places, became part of the National Ice Age Trail, and later part of the State’s Maritime Historic Trail. Likewise, similar actions have occurred on the Lower Fox System where the cluster of locks became recognized as unique technological artifacts from a bygone era.

Efforts began in the 1980s to save the Lower Fox System when the State created the Fox River Management Commission. Several advocacy groups to preserve the waterway were formed. A concept known as the Fox-Wisconsin Heritage Parkway was finally born that would be financed by federal, State, and local funds. The State subsequently disbanded the Fox River Management Commission and created the Fox River Management Navigational System Authority (FRNSA).

The inactivated system prevented boats from traveling downriver from Lake Winnebago to Green Bay, a distance of nearly 40 miles with 17 locks. Concern mounted about the steady deterioration of the dormant locks, all of which had been placed on the

National Register of Historic Places. In 2001, a 10-year plan to rehabilitate, maintain, and operate the waterway was formulated and funded by the State. Construction got underway in 2005 and was largely completed by 2015, with the five locks at Kaukauna being the last to be reopened in 2017. The system was now officially called the Fox-Wisconsin Heritage Parkway. A downstream cruise of about 25 miles from Lake Winnebago to the Rapid Croche Lock became possible; likewise, an upstream cruise from Green Bay to Rapide Croche could be made. However, the Rapide Croche Lock itself, located between Kaukauna’s Fifth Lock and the downriver one at Little Kaukauna, remains filled.

As mentioned, this action is to prevent invasive species from entering the upper portion of the Heritage Parkway. A special transfer station will be built at Rapide Croche to decontaminate up-bound boats; it will be a lift-transfer facility where vessels are disinfested with a hot, pressurized wash-and-soak cleansing procedure. The station was budgeted at 3.8 million dollars, but submitted offers have come in too high, so rebidding is presently underway; there is no reliably firm date for its completion at this time. But at some future date, a vessel will be able to transit the lower river route once again, “locking through” along the way, just as steamboats did over a century ago!

### Selected References

“Byron Kilbourne: Another Pioneer Gone,” *Milwaukee Sentinel*, 19 December 1870.

Mermin, Samuel, *The Fox-Wisconsin Rivers Improvement: A Historical Study in Legal Institutions and Political Economy*. Madison: University of Wisconsin Extension, 1968.

Smith, Alice E., *History of Wisconsin: From Exploration to Statehood*, Vol. 1. Madison: Wisconsin State Historical Society, 1973.

“*The Fox River Locks*,” Information brochure. Kaukauna, WI: Fox River Navigational System Authority, 2015.

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.



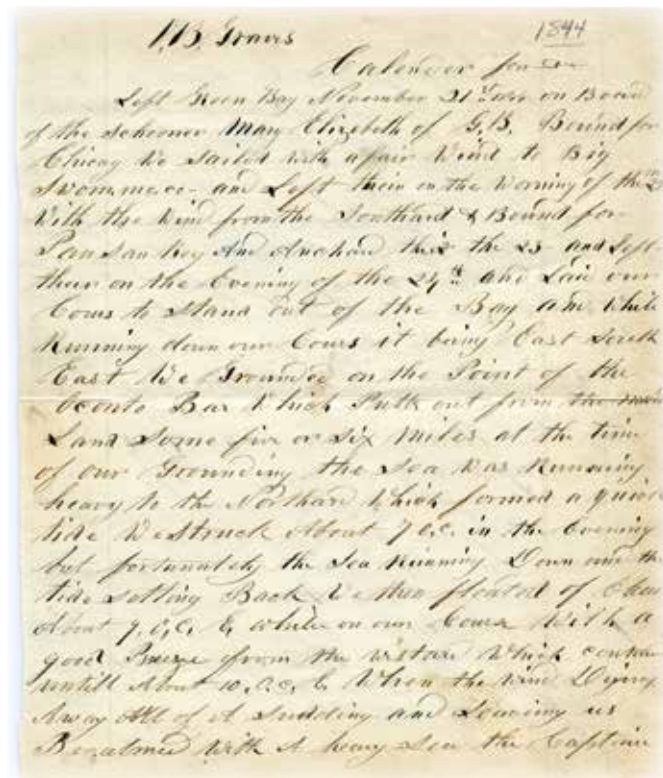
## Collections: Out to See Handwritten Narrative Accounts

By Caitlin Clyne, Registrar/Collections Manager

*The archives of the Wisconsin Maritime Museum contain hundreds of manuscripts and ship's logs. Among them are two different handwritten narrative accounts describing schooner voyages on Lake Michigan to Chicago in the mid-1800s. While deciphering 19th-century handwriting can be a challenge, they often lend a unique voice to the narrative of both noteworthy and everyday occurrences. Both voyages recounted here describe fierce storms underway, but with very different endings to their journeys.*

### An 1844 Schooner Voyage on Lake Michigan

This three-page account in our archives describes a voyage the author took aboard the schooner *Mary Elizabeth* from Green Bay, Wisconsin to Chicago, Illinois in November 1844. November is a notorious month for storms on the Great Lakes and this trip was no exception. In fact, the hardest part of their journey was just making it out of the Bay of Green Bay!



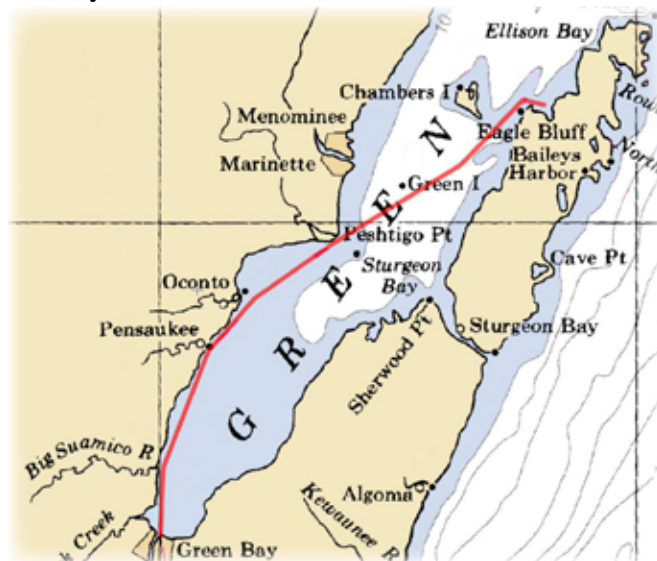
Handwritten narrative of the voyage. [WMM M83-7-1]

Edited for grammar and clarity:

"Left Green Bay November 21st on board of the schooner *Mary Elizabeth* of Green Bay. Bound for Chicago, we sailed with a fair wind to Big Suamico and left there on the morning of the 22nd with the wind from the south & bound for Pensaukee.

Anchored there the 23rd and left there on the evening of the 24th. Laid our course to stand out of the Bay and while running down our course, it being east south east, we grounded on the point of the Oconto Bar, which juts out from the main land some five or six miles. At the time of our grounding, the sea was running heavy to the north which formed a quick tide.

We struck about 7:00 in the evening but fortunately the sea running down and the tide setting back. We then floated off clear about 9:00, while on our course with a good breeze from the west. [It] continued until about 10:00 with the wind dying away all of a sudden and leaving us becalmed with a heavy sea. The Captain Henry Ketchum of the schooner ordered all sails to be furled in haste, as he said that [the storm] had only let go to take a new hold. Alas too true. Almost the instant of the last sail being sent to the decks, the gale struck us in its fury as if enraged at the loss of its victims. The winds raged and the sea roared and sent the spray fore and aft with a vengeance indescribable while we were a scudding away afore the wind with our jib standing with the ferocity of the winds as it were it raged in its fury.



A rough estimation of the *Mary Elizabeth*'s route to Eagle Harbor. [Map created by author.]

Continued on page 13...

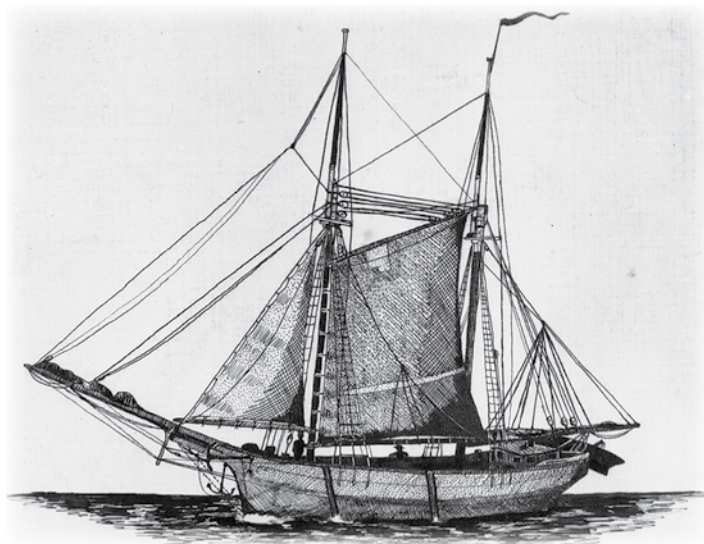


## ...Handwritten Narrative Accounts

The *Mary Elizabeth* made it out majestically and only shipped one sea astern which carried away one of the dories and injured the yawl a little but they succeeded in securing it in tow until the morning of the 24th when we made Eagle Harbour about 11:00 and remained there about 5 hours and repaired damages. We left and pursued our way for Chicago and arrived there on the night of the 29th safe and sound and glad to rest from the howling of the seas."

### Protest of the Schooner *Citizen*

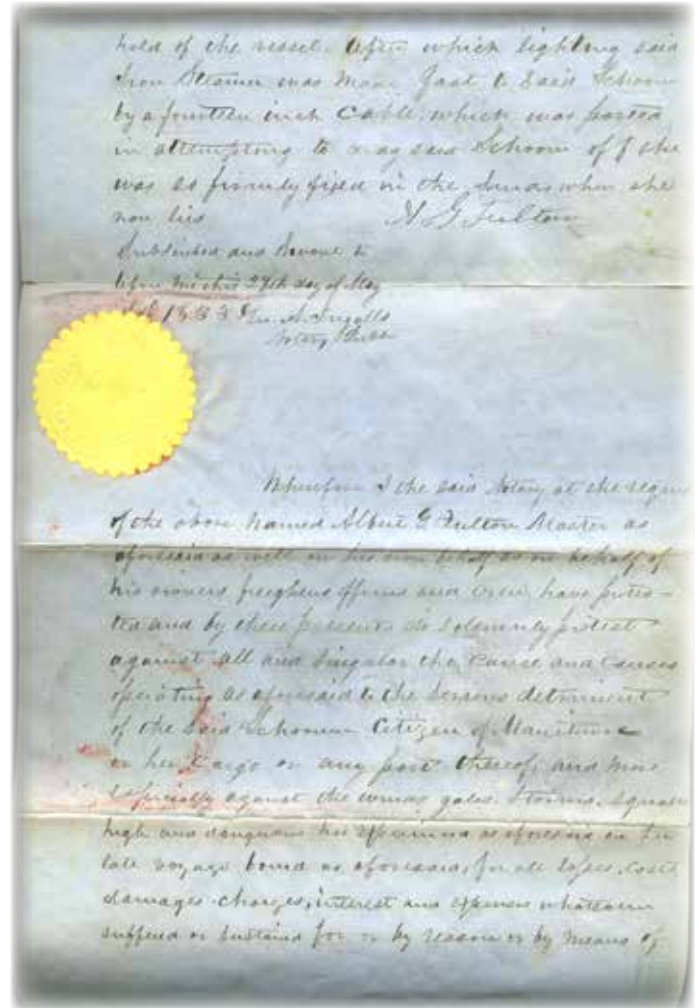
Another handwritten manuscript in our archives dates from just nine years later. Titled as a "protest," the account serves as a notarized witness statement by the captain of the wreck of the schooner *Citizen* in May 1853.



Original sketch of the schooner *Citizen* by Eugene Eldridge, 1850. [WMM P85-47-1]

Built in 1847 by Capt. Joseph Edwards, the *Citizen* was the very first schooner built in Manitowoc, Wisconsin. Captain Albert Fulton was only 21 years old when he took command of the *Citizen* in 1853. He had captained only one other vessel previously, which also sank under his command the year before. (See sidebar for more details on Fulton's career.)

According to Fulton's account, the schooner *Citizen* had been "tight, staunch, and strong; well manned, victualled, and sound in every respect" when she left



Notarized account of the *Citizen*'s wreck. [WMM M79-7-9]

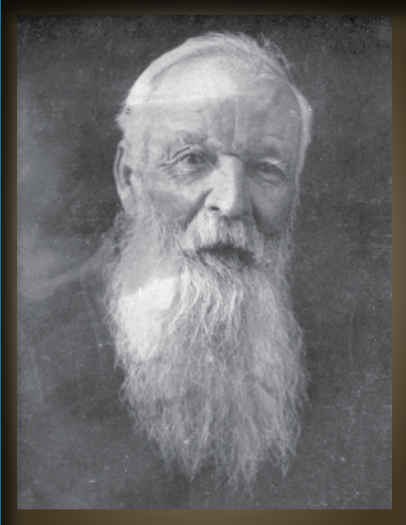
Manitowoc on May 16, 1853. The ship was bound for Chicago with a cargo of over 1000 white cedar posts and 20 barrels of fish.

The voyage went smoothly until late the following evening, when they were approximately six miles north of the port of Chicago, a ¼ mile off shore. The wind blowing from the northeast suddenly died away while the rolling waves continued to push the schooner west towards shore. Without any wind to control their sails, they were helpless in the water, so Capt. Fulton ordered the crew to drop both anchors to keep the ship from grounding. About two hours later, at 1:00 a.m. on May 18, a heavy squall from the west suddenly came on. Before the crew could raise both anchors, the strong wind broke one of the anchor chains.

Continued on page 14...

# Capt. Albert G. Fulton: Cursed or Lucky?

By Caitlin Clyne



Albert Fulton long after his sailing career.  
[WMM P78-79-144]

In the span of five years, Captain Albert Fulton was shipwrecked four different times: three were ships he captained and one he rode as a passenger. Amazingly, there were no lives lost in any of the wrecks.

Capt. Fulton's 20-year career on the Great Lakes began when he was just 10 years old, serving first as a cook's

assistant and later as a cabin boy and ship's mate. In 1852, Fulton was made a captain at age 20. That same year, Fulton's first command, the lumber schooner *Defiance*, wrecked in a severe storm off Sheboygan, Wisconsin. Fulton and his crew spent four days "at the mercy of the waves" before they were finally rescued.

In May 1853, his schooner *Citizen* wrecked in strong winds north of Chicago. Just one month later, Fulton was a passenger aboard the schooner *North Yuba* (built in Manitowoc, Wisconsin that same year) when it capsized in a squall off Racine, Wisconsin. Fulton's career continued without incident for a few years until 1857, when Fulton became the first captain of the schooner *A. Baensch* (built in Manitowoc by G.S. Rand). Six months after taking command, Fulton wrecked the *A. Baensch* when he missed the piers while attempting to enter the Chicago River. Five years later at age 30, Fulton gave up his sailing career and went on to purchase a farm in Manitowoc County. For the next 40-plus years, Fulton stuck to farming (and dry land). He frequently told stories of his sailing adventures and in his obituary, he was still referred to as "Captain Fulton."

## ...Handwritten Narrative Accounts

According to Fulton, the wind then changed direction and blew the schooner, with its remaining anchor still dragging, aground in shallow waters near Waukegan, Illinois.

The captain and crew spent the next 12 hours unsuccessfully trying to extricate the ship from the sandy bottom. By the afternoon, waves began washing over the deck and carrying much of the deck cargo overboard. By 6:00 p.m., they had lost ten barrels of fish and about 400 cedar posts. By midnight, the schooner had filled with so much water that the captain and crew were forced to jump overboard. While the crew stayed near the *Citizen*, Captain Fulton went to Chicago to get aid and returned with the iron steamer *Michigan*. They used the *Michigan's* lifeboat to transport the 15 remaining barrels of fish to shore. The schooner was still too heavy and waterlogged for the *Michigan* to drag off the beach, so Captain Fulton and his crew threw about 700 cedar posts overboard to lighten the vessel. Even then, the *Michigan* was unsuccessful and broke a cable attempting to pull the *Citizen* free.

However, this wreck was not the end of the *Citizen*. About six weeks after this incident, she was finally pulled off the beach and put back into service for five more years until she wrecked for the final time south of Saugatuck, Michigan in 1858.

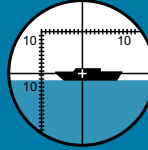
To see digital scans of both manuscripts and read the full transcriptions, visit our online collections at [www.wisconsinmaritime.past-perfectiononline.com](http://www.wisconsinmaritime.past-perfectiononline.com) or click the "Explore Our Online Collection" section on the main page of our website. In the online collection, search by the catalog number in the captions or by the ship's names.

Caitlin Clyne is the Registrar/Collections Manager at the Wisconsin Maritime Museum. She can be reached at (920) 684-0218 x111 or [cclyne@wisconsinmaritime.org](mailto:cclyne@wisconsinmaritime.org).





## Cobia Corner



By Karen Duvalle



### HAPPY BIRTHDAY COBIA!

This is a big year for our premier artifact. She'll celebrate the 75th anniversary of her keel laying and launch!

The Electric Boat Company of Groton, CT laid down the keel of USS *Cobia* on March 17, 1943. Electric Boat constructed her on the 10th ways of the Victory Yard and she was number 76 out of 77 Gato class submarines built by the company. Once constructed, she was 311' 9" long, 28' wide, and weighed 1,526 tons on the surface.

The company launched *Cobia* on November 28, 1943, a cold, blustery day. The christening bottle barely touched the sub and did not break, so a second person grabbed it and smashed it on the hull just before she hit the water.

After the Navy commissioned her the following March, *Cobia* went on to serve six war patrols in the Pacific Ocean. She sank a total of 13 ships and also rescued seven downed airmen in April of 1945. In May of 1945, she was badly depth charged while in the Gulf of Siam (Thailand). The crew endured several hours of relentless depth charges from a Japanese minelayer that pounded the sub and pushed her 27 feet into the mud of the shallow Gulf. Fortunately, it was the mud that protected the hull and they were eventually able to wiggle free and escape. The Manitowoc-built submarine USS *Lagarto* was not so lucky. They were sunk by that same minelayer just two weeks earlier.

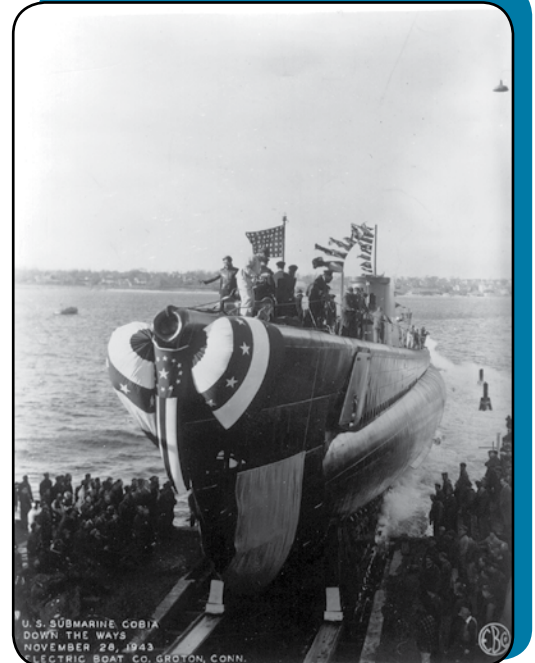
*Cobia* also had one casualty during the war. Ralph Clark Huston, Jr. was just 19 years old and had been aboard only two weeks when he was shot during a surface gun battle against two small Japanese ships. Chief Pharmacist Mate, Herbert "Doc" Starmer, was unable to save young Ralph and his shipmates buried him at sea the following morning.

After the war, *Cobia* returned to Connecticut. She served as a training vessel and took her last dive on October 5, 1953 before the Navy dry docked her and put her into the reserve fleet. In 1959, they transferred her to Milwaukee, Wisconsin to serve as a training platform for the Naval Reserves. In 1970, the U.S. Navy transferred ownership of *Cobia* to the Manitowoc Submarine Memorial Association (now the Wisconsin Maritime Museum) and on August 17 of that year the museum had *Cobia* towed to her permanent home in Manitowoc. During the nearly fifty years since her arrival, she's been designated as an International Submariners Memorial and a National Historic Landmark.

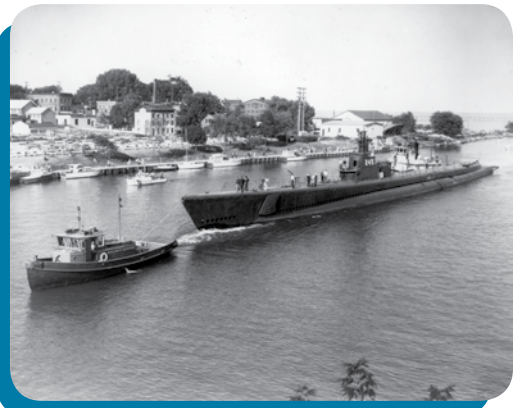
Our dedicated tour guide staff educates thousands of people from around the world every year. Additionally, our popular overnight program just celebrated 20 years in 2017. In that time, over 63,000 people have participated in this unique and immersive program, including groups from 9 different states and Canada!

Be sure to visit us this year as we celebrate 75 years of our beloved boat with events and programs throughout 2018, including a birthday celebration in March, our 4th annual Subfest, and a launch party in December!

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](mailto:kduvalle@wisconsinmaritime.org).



*Cobia's Launch, November 28, 1943, Groton, CT.  
[WMM Collections, 2004-13-1]*



*Cobia arriving in Manitowoc, August 17, 1970.  
[WMM Collections, P78-67-18]*



# The Current

## Welcome New Deputy Director & Chief Curator Cathy Green

Think back to when you were a kid. Can you remember visiting museums? Historic sites? National and State Parks? Monuments and Battlefields? I bet you can. While it may seem natural to you that exploring history is inherently interesting, valuable, and indeed essential, not everyone sees it that way. Museums, historic vessels, and the like are touchstones to inspiring that interest, and fortunately, many of us were introduced to those places early on. My busy mother could have driven right by when her six-year-old daughter asked what THAT big old building was. I am forever grateful she stopped on that ordinary weekday afternoon circa 1970-something to find out, encouraging me to knock on the immense door of our town's historic home museum. It was big, run down, and absolutely fantastic. The tour guide painted vivid pictures of the ship captains and Civil War profiteers that attended dances in the dusty ghost-filled ballroom of this mansion on the banks of the Ohio River.

Experiences like this set me on the path of studying history and inspired a deep love of museums and the storytelling that takes place there. I studied history and fine art at Indiana University, Bloomington with a formative year at the University of Kent in Canterbury, England (The castles! The cathedrals!). My senior year culminated with many studio art and museum studies courses and a practicum at the anthropology museum on campus. When my post-college adventures led me to the Bermuda Maritime Museum, I was introduced to marine archaeology and eventually graduate studies at East Carolina University. While I honed my skills as a scientific diver and marine archaeologist, my thesis research took me to the figurehead collection at the Mariners Museum in Newport News, Virginia. By now, I discerned a clear and reoccurring museum theme.

Master's degree in hand, I spent several years sailing the east and west coasts, around the Caribbean and across the Pacific seeing the transformative power of

place-based education as the humanities instructor for Long Island University's SEAmester program. Teaching maritime history on the rolling deck of a wooden schooner certainly demonstrated the efficacy of connecting students to history through experiences.

Between voyages, I landed in Wisconsin working in the Office of the State Underwater Archaeologist studying the state's incredible collection of shipwrecks. Several seasons of diving, grant writing, public speaking and collaborating with volunteers prepared me for my following position at NOAA's Office of National Marine Sanctuaries. For the past 13 years, I served in several positions with NOAA including marine archaeologist, education coordinator, and grants officer at Thunder Bay National Marine Sanctuary. I was part of the team that developed the Great Lakes Maritime Heritage Center into a hub for exhibits, programs, and yes, experiences that bring Great Lakes shipwreck stories to the public. I am incredibly fortunate to have worked with such a dynamic team of professionals for over a dozen years, and know those experiences inform what I bring to the museum in terms of management, operations, and continued collaboration with maritime experts around the region.

Like that tour guide from my first encounter with museums, we have the chance to tell a vivid story to guests at the Wisconsin Maritime Museum, blending material culture (artifacts), historic accounts (documents), and personal experiences (walking the decks of *Cobia*). Through exhibits and programs, archives and vessels we can compose an incredibly compelling tale of Wisconsin and its rich maritime past. However, if we do our job correctly, we not only tell a story, but we connect people to our present maritime narrative and make essential that interest and love of history and our Great Lakes.

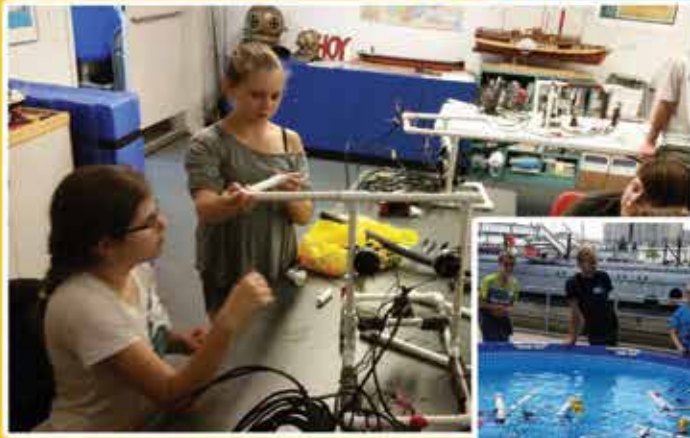
Cathy Green is the Deputy Director and Chief Curator at the Wisconsin Maritime Museum. She can be reached at (920) 684-0218 x 120 or [cgreen@wisconsinmaritime.org](mailto:cgreen@wisconsinmaritime.org).



# 2018 SIGN UP TODAY! ROV SUMMER CAMP! BUILD. COMPETE. EXPLORE. July 21-22 | July 28-29

Wisconsin Maritime Museum - Downtown Manitowoc  
[www.wisconsinmaritime.org/learning-programs/rov-summer-camp](http://www.wisconsinmaritime.org/learning-programs/rov-summer-camp)  
**AGES 12-14**

## IN THE CLASSROOM



\*Hands-on STEM (Science, Technology, Engineering, & Math) Education

\*Learn & Apply Physics and Electrical Engineering principles

\*Collaborative Problem-Solving & Team ROV Building

\*Compete against other camp teams

## ON THE WATER

\*Lake Michigan On-the-water experience

\*Deployment of professional-grade ROV over shipwrecks in the proposed Nat'l Marine Sanctuary

\*Conduct Water Quality Testing

\*Work directly with maritime archaeologists, engineers & related STEM professionals



Presented by:



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MUSEUM  
AT MANITOWOC



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GREEN HAT PACKERY  
FOUNDATION

FOR MORE INFO: Cathy Green

[cgreen@wisconsinmaritime.org](mailto:cgreen@wisconsinmaritime.org)

920.684.0128



# Member's Locker

**Welcome New Members** *As of Feb 8, 2018*

Curt & Candice Bentley  
William & Luan Burton  
Aaron & Jordan Forgues  
James Glennon  
John Glesner  
Jim & Linda Heinicke

Jim Kocian  
Mark Obernberger  
Steve & Mary Olsen  
Brian & Amy Randall  
Kevin & Samantha Shedlosky  
Samuel Spurney

Dennis & Mary Swetlik  
Debra Voss  
Carol Zadalis

## Corporate Fleet, Winter 2018

### **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 Co.  
Hein Plumbing  
Lakeside Foods  
Manitowoc Marina  
Schenck SC  
Steimle Birschbach, LLC

### **CUTTER (\$500+)**

Ansay & Associates  
Associated Bank, N.A.  
Burbey CPA, LLC  
Carron Net Company, Inc.  
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+)**

\*Broken Plate Catering  
Courthouse Pub  
Michael Best & Friedrich, LLP  
The Smiling Moose Saloon & Grill/  
Moose On The Loose Catering

*\*Thank you to our new Corporate Fleet member!*

## NEW Donations to Our Collections: With Many Thanks to Our Donors

**American Legion Post 88:** Framed print of USS *Wahoo* painting by Steve Petreshock

**Lonnie Erdmann:** Photographs of the passenger steamers *Alabama* and *Christopher Columbus*

**Merlin Maas:** Binnacle from the shipwreck of the 1916 yacht *Rosinco* recovered by Kent Bellrichard c. 1973

**Dennis Mueller:** Booklet on Peterson Builders and brochure on Littoral Combat Ships built at Marinette Marine

**Mary Ann Peppard:** Maritime artifacts from the Estate of Robert J. Peppard

If you have an item you'd like to donate to the Wisconsin Maritime Museum, please contact the Registrar/Collections Manager Caitlin Clyne at (920) 984-0218 x111 or [cclayne@wisconsinmaritime.org](mailto:cclayne@wisconsinmaritime.org)



# 42<sup>ND</sup> ANNUAL

## MIDWESTERN MODEL SHIPS & BOATS CONTEST AND DISPLAY

May 18th - 20th, 2018 (Modelers)  
May 19th - 20th (Public)

**PLEASE JOIN US FOR THE LONGEST RUNNING,  
JUDGED MODEL SHIPS AND BOATS CONTEST  
IN THE NATION!**

- *Meet Modelers*
- *Watch Demonstrations*
- *Vote For Your Favorite Model*
- *and more!*



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75 Maritime Drive  
Manitowoc, WI 54220  
Toll Free: 866-724-2356  
Local: (920) 684-0218  
[museum@wisconsinmaritime.org](mailto:museum@wisconsinmaritime.org)  
[www.wisconsinmaritime.org](http://www.wisconsinmaritime.org)



## Coming Events

### ***Wisconsin Maritime Museum Annual Meeting - April 19th, 2018 at 5:30pm***

The Wisconsin Maritime Museum is holding its annual meeting at the museum in the Riverview Room. The meeting is open to the public, and museum members are especially encouraged to attend. The meeting will include a presentation by photographer Chris Winters on his images of Great Lakes vessels and his new book on the schooner *Denis Sullivan*. Refreshment will be provided.

### ***USS Lagarto Remembrance Ceremony - May 5th, 2018 at 1:00pm***

Join us as we remember the 86 crewmen of the Manitowoc-built submarine USS *Lagarto*. The sub was sunk on May 3, 1945. The ceremony will take place on the deck of USS *Cobia*. This free event can be viewed from the Museum's Quarterdeck.

### ***42nd Annual Midwestern Model Ships & Boats***

#### ***Contest and Display - May 18-20, 2018 (Modelers) and May 19-20 (Public)***

Please join us for the longest running, judged model ships and boats contest in the nation! Meet modelers, watch demonstrations, vote for your favorite model and more. Registration materials will be available closer to the event.

### ***USS Cobia Amateur Radio Club Event - June 2-3, 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 for the annual International Ships Afloat Weekend. Visitors can see and talk with Amateur Radio Club NB9QV members on board the submarine this weekend!

### ***ROV Summer Camps - July 21-22, 2018 & July 28-29, 2018***

Build, Compete, and Explore the world of underwater robots in a weekend camp for 12-14 year-olds centered around Remotely Operated Vehicles (ROVs). Students will spend Saturday learning to apply physics and electrical engineering principles through collaborative problem solving and team ROV building. Sunday, participants will continue to refine their creations to compete in scenarios based on real ROV missions. Finally, they will get to explore Lake Michigan first hand by going out on the Lake and deploying ROVs and collecting data with scientists and maritime professionals.

Two weekend sessions are available. Students must register in advance. Registration Fee is \$50.

<http://www.wisconsinmaritime.org/learning-programs/rov-summer-camp/> Space is limited, sign up today!

Visit [www.wisconsinmaritime.org/special-events/](http://www.wisconsinmaritime.org/special-events/) for updates on all of our activities.