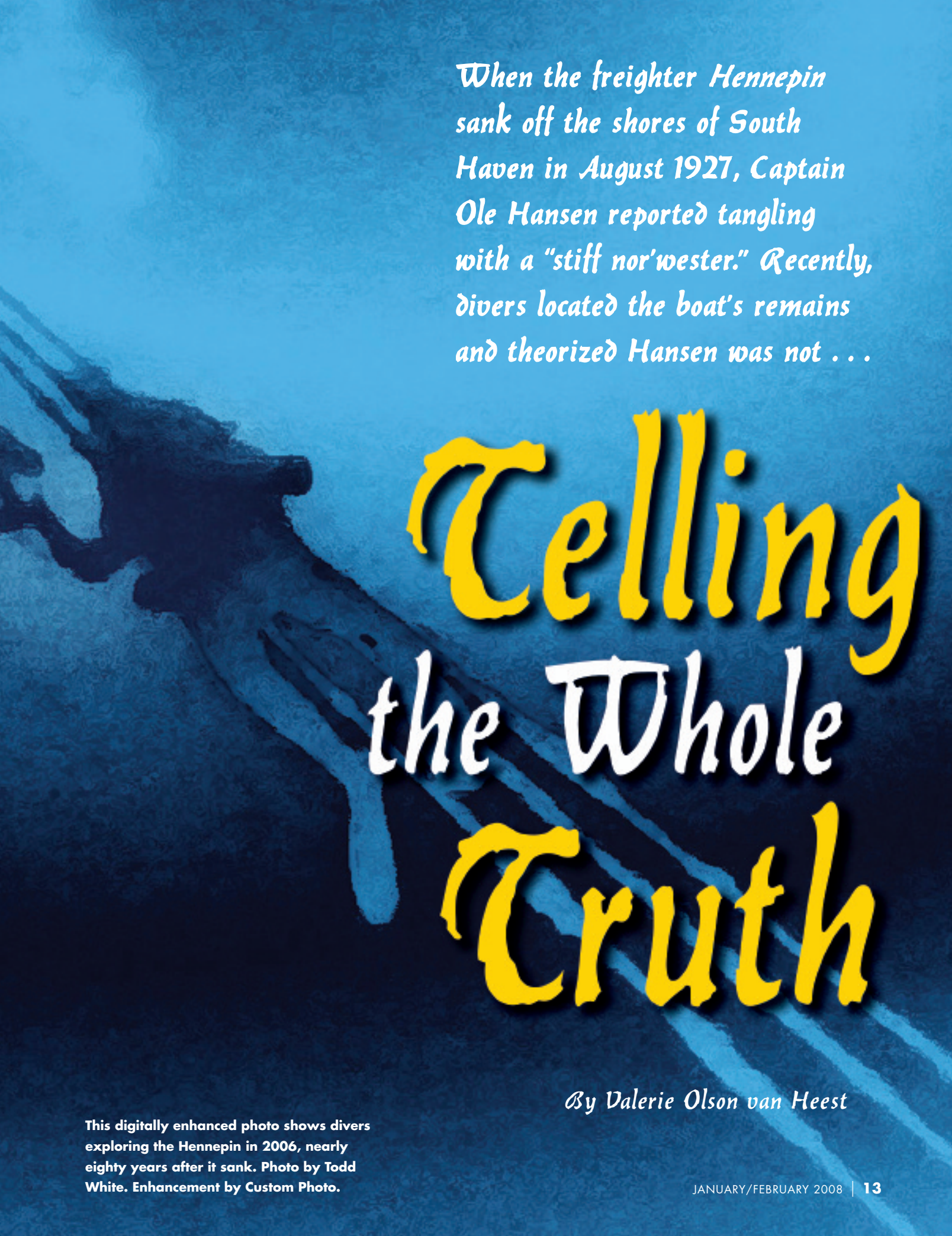
When the freighter Hennepin sank off the shores of South Haven in August 1927, Captain Ole Hansen reported tangling with a "stiff nor'wester." Recently, divers located the boat's remains and theorized Hansen was not . . .

Telling the Whole Truth

By Valerie Olson van Heest



This digitally enhanced photo shows divers exploring the Hennepin in 2006, nearly eighty years after it sank. Photo by Todd White. Enhancement by Custom Photo.

Milwaukee Library

During the 1920s, the *Hennepin* hauled aggregate from Ferrysburg, Michigan, to Chicago. The stone helped build such landmarks as the Outer Drive, the Field Museum, Shedd Aquarium and Adler Planetarium.

On the sultry evening of August 18, 1927, the forty-foot tugboat *Lotus* headed up the Grand River to its homeport of Ferrysburg, Michigan. The tug had departed the day before, bound for Chicago, towing the 200-foot barge *Hennepin* loaded with a cargo of crushed stone. As the *Lotus* neared the dock, Captain Albert Anderson blew the steam whistle to get the attention of workers near the dock. Something was wrong. There were too many people aboard the *Lotus*, and the *Hennepin* (one of the work horses on the Great Lakes), was nowhere in sight. Workers on shore wondered, "Where was the *Hennepin*?" As the *Lotus* neared the dock, a voice from the tugboat shouted out, "We lost her boys--she died a hard death."

Nearly eight decades after the *Hennepin* sank in Lake Michigan, the Michigan Shipwreck Research Associates (MSRA) set out to find the ship that ended its nearly forty-year Great Lakes' career as a barge. Dedicated to bringing maritime stories to life through exploration and documentation of shipwrecks, MSRA felt that the discovery of the *Hennepin* would highlight the important roots of an industry that was revolutionized when the boat was retrofitted with a simple conveyor belt.

The 214-foot *Hennepin* was built by Milwaukee's Wolf and Davidson shipyard, the largest shipbuilder in the region, and launched in October 1888. The steamer was originally named the *George H. Dyer*, after William Wolf's son-in-law. Fitted with three masts and a salvaged engine, and possessing a 1,600-ton hold, the *Dyer* was built for hauling cargo.

The *Dyer* changed hands many times in her life. At ten years old, she was sold to a Michigan partnership to transport package freight for the SOO Line Railroad through the Great Lakes. At that time, the boat was renamed *Hennepin*, after the county in which the SOO line railroad was headquartered in Minneapolis.

On June 27, 1901, while loading at a dock in Buffalo, the *Hennepin* caught fire and was badly damaged. She could have drifted into obscurity. Instead, the ship was repaired, and retrofitted with conveyor belts and a large a-frame. Unknowingly at the time, the *Hennepin* became the world's first self-unloading steamer and one of the most significant vessels to sail the Great Lakes because she provided the model for virtually all future self-unloading bulk vessels--on both fresh and salt water.

After the fire, entrepreneur Frank Merrill bought the hulk for $18,000. Merrilll had just formed the Lakeshore Stone Company to mine the shallow limestone deposits near the shores of Lake Michigan, east of Belgium, Wisconsin. Merrill hired Chicago's Webster Engineering Company to design a state-of-the-art quarrying operation complete with a pier into Lake Michigan for loading stone. To transport the quarry's output,

Bob Underhill

The *Hennepin's* wheel remains in good condition. However, the pilothouse that surrounded it was forced off the boat's deck during the sinking.

Webster engineered an unloading system for the *Hennepin*, not much different from the conveyors used to haul stone up from within the quarry. The Milwaukee Dry Dock Company, a consolidation of the ship's original builders, fabricated and installed the system on the *Hennepin*.

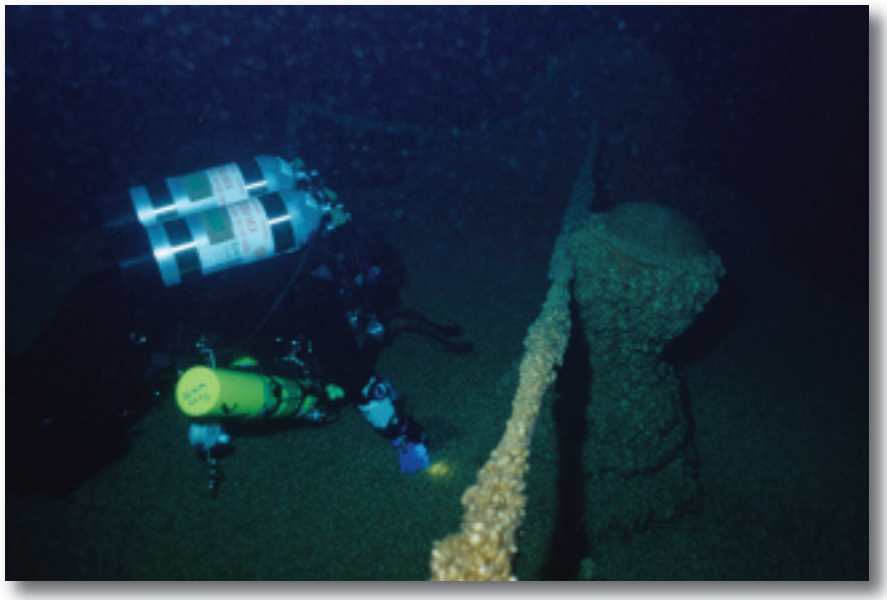
Inclined walls within the ship's hold dispensed cargo onto conveyors that ran below deck the entire length of the ship. The conveyors moved the cargo into a hopper where it was transferred to an inclined conveyor. From there, it moved up to the conveyor boom on deck, which swung over to deposit the bulk material on land. The ship no longer required massive shore infrastructure at major harbors to unload its cargo. As important, the *Hennepin* could discharge its stone not only in a small harbor, but along a river, into a construction caisson or into trucks.

In 1923, Lakeshore Stone Company sold the *Hennepin* to the Chicago-based Construction Materials Corporation, which planned to mine stone up the Grand River from Grand Haven. The *Hennepin* would be used to haul the aggregate. (Today the quarry has filled with water and is the site of the Bass River Recreational Area in Ottawa County.) After being quarried, stone was brought down the Grand River to Ferrysburg where it was sorted into different-sized gravel and rock, then loaded onto ships and transported to Chicago. Much of the gravel hauled to Chicago on the *Hennepin* was used as fill, becoming the bed for Outer Drive and the Field Museum, Shedd Aquarium and Adler Planetarium.

After more than thirty years on the lakes, the *Hennepin*'s hull had weakened. Since the self-unloading equipment was still operational, the owners extended the vessel's life by removing its heavy engine. The *Hennepin* became a barge towed by the tugs *Lotus* and Ufasco until that fateful day in August 1927.

The only known account of the *Hennepin*'s sinking was a news article from the *Grand Haven Tribune* in which Captain Hanson blamed a "stiff nor'wester" for causing his ship to sink. Weather records from the National Climatic Data Center from August 18, 1927, however, indicated only a moderate breeze was blowing that day. The discovery of an oral history from Vern Verplank, a former *Hennepin* crewmember who spoke with several *Hennepin* crewmembers, shed additional light on the sinking.

According to Verplank, "On a tow-barge none of the officers had to be licensed. In fact, most of them were ex-licensed, having lost theirs after an accident or due to alcohol abuse." Ole Hanson may not have been licensed, but could have found



Bob Underhill

The *Hennepin's* tow hawser is still in position, just as it was when the Lotus cut the boat loose on that fateful day in August 1927.

employment on the tow-barge *Hennepin*.

On August 18, 1927, after offloading her cargo of gravel in Chicago, *Lotus* Captain Albert Anderson directed his crew to secure the hawser (tow cable) that ran from the *Hennepin* to the tug. With an empty hold, the *Hennepin* was riding high on her return trip to Grand Haven. "The old hull," Verplank explained, "was taking on water as she typically did and all ten of her bilge pumps were running."

It was smooth sailing for the first few hours, but around 10:30 A.M. Hanson noticed the pumps weren't keeping up with the incoming water. "Chief Engineer Abe Lyons, notorious for slacking, must not have kept the pump filters cleaned," the former *Hennepin* crewmember recalled. Any attempts to clean the pumps at that point were futile as the water was gaining fast.

By 2:30 P.M. It was clear that *Hennepin* was not going to make it home. According to Verplank's account, "Abe Lyons grabbed the distress whistle and blew it four or five times to get the tug's attention. Captain Hanson called out to abandon ship. Ernie Casperson, the cook, took quarters of beef out of the cooler. Lyons went down to the engine room and took off the big brass clock." They launched the lifeboat in calm seas and rode away from the *Hennepin* with no panic or pandemonium.

As the big ship wallowed deeper in the water, the crew of the *Lotus* finally released the hawser. "Everyone watched," Verplank recorded, "as the *Hennepin* finally sank beneath the waves and the whole galley house floated right up from the ship. The *Lotus* rammed it to break it up so it would not be a hazard to other ships."

With nothing to do but wait out the return trip, Hanson must have realized the sinking of the *Hennepin*, valued at over $100,000, meant a huge loss for the company, which still had enormous quantities of gravel to transport to Chicago. He would also have been concerned for his own livelihood, because there were few employment options for unlicensed captains. When the tug reached its homeport, Hanson blamed a "stiff nor'wester" for sinking his ship. Recent study of historic weather records, however, indicate the wind never exceeded 17 miles per hour, which according to the beaufort scale, is a gentle breeze that creates two-to-three foot waves. It seems likely that Hanson invented the tale to shift blame from himself and the crew.

The loss of the *Hennepin* was a great blow to the owners of the Construction Materials Corporation. With an active quarry operation, they needed another vessel to carry the thousands of tons of gravel yet to be mined. It was nearly a year before they chartered another self-unloader, the Andaste, to handle their transport needs. The *Andaste* was equipped with Leathem Smith's first patented tunnel scraper system, which was

An Underwater View of the *Hennepin*

Jack van Heest

Author Valerie Olson van Heest dove on the *Hennepin* in August 2006.

In August 2006, I made my first my first tri-mix dive on the *Hennepin* with my dive buddy Bob Underhill. The visibility was exceptional and nearly seventy feet above the bottom, I could see the wreck sitting upright on the flat sand bottom in near-perfect condition, evidence that the ship sank slowly. Ambient light penetrated to the bottom, but I used a light to accentuate detail.

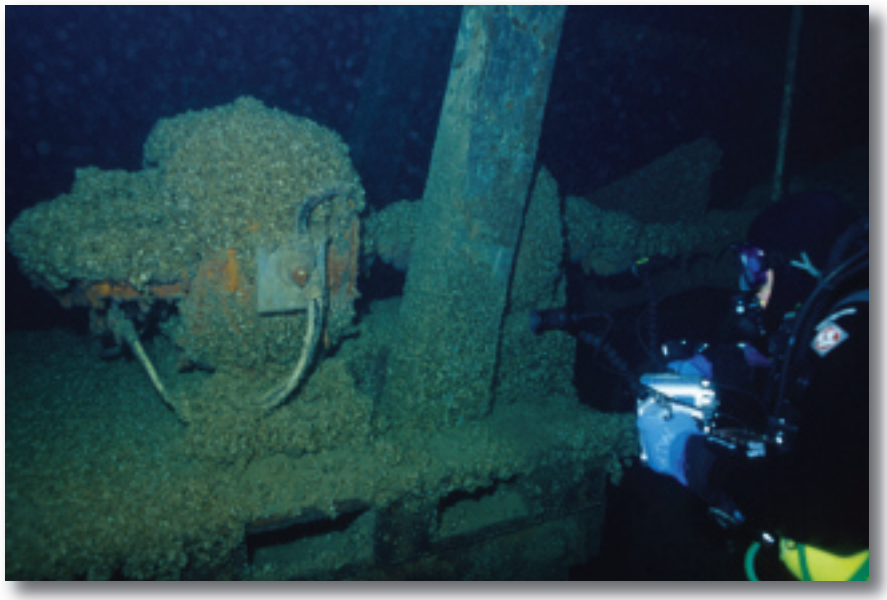
The two-story wheelhouse is missing, likely carried away during the sinking. Otherwise the forward deck, called the "forecastle," remains intact. The tow winch sits in the center of the forward deck, still coiled with the hawser that runs taut through the fairlead at the tip of the bow. From there, the cable curves gently downward to the bottom where the bitter end lies in the sand just as it was cast off by the crew of the *Lotus*. The capstan, which was used to raise and lower the anchor, sits forward of the tow-winch and bears the engraved name *G.H. Dyer* on its domed cover. Swimming aft, I reached the giant ship's wheel, which had been located in the wheelhouse, now exposed on deck. Every spoke was in perfect shape.

Just behind the wheel, the main deck steps down and I could see the five cargo hatches. I swam around the still-standing mainmast, located forward of the first hatch. Behind that, the conveyor boom lies over the hatches down the center of the deck. Only the canvas belt is missing, deteriorated after its long submersion. Looming in the distance, I could see the massive forty-foot tall A-frame standing securely in place with its cable still ready to hoist the boom into position. Passing under it, I looked up to see this impressive structure silhouetted by the light filtering down from above.

Reaching the stern, I came to the boiler house. Although the engine had already been removed before the sinking, the boiler, which supplied steam for the unloading equipment, remains intact in the stern, but the smokestack has toppled. The aft mast has also fallen.

The most significant damage is to the stern and starboard hull, portions of which have fallen outward. The broken hull, however, conveniently provides a perfect cutaway view of the inner workings of the conveyor system that runs the length of the hold. Returning to the bow to begin my forty-five-minute decompression ascent, I reflected on what I had seen. It is ironic that the pioneering equipment, which makes the *Hennepin* such an archaeologically significant ship, is completely intact, while the older hull has deteriorated around it.

–Valerie Olson van Heest



Bob Underhill

The *Hennepin's* electric motor at the base of the A-frame was used to lift the boom into position for unloading.

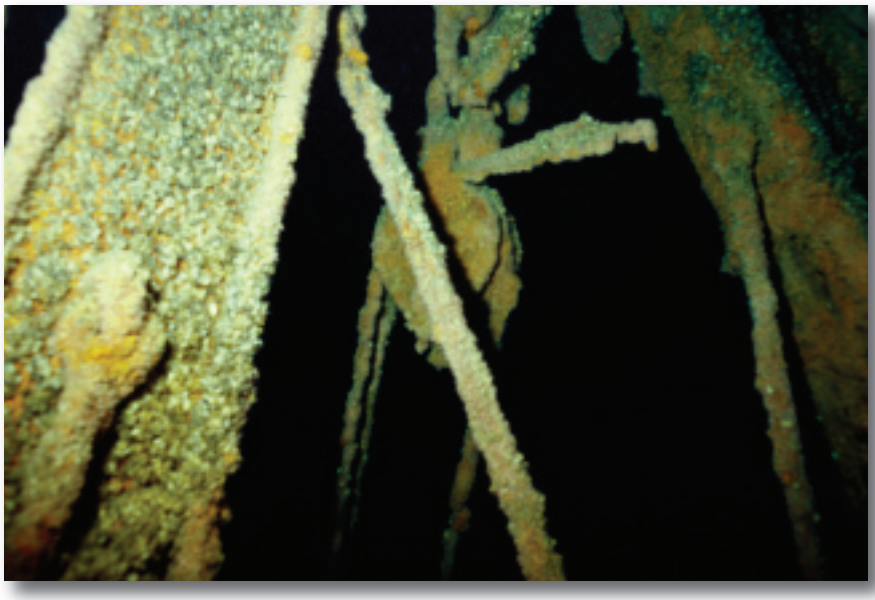
inspired by the *Hennepin*'s innovative design.

The *Andaste* died an even harder and more tragic death than the *Hennepin*. Just two years after the *Hennepin* sank, the *Andaste* was swallowed up just miles from her predecessor. The ship took with her Captain Albert Anderson, who had piloted the tug *Lotus* when the *Hennepin* sank, and all twenty-eight crewmembers, many of whom had served on the *Hennepin*. Tragedy aside, it is truly remarkable that Lake Michigan holds the first two examples of revolutionary developments in bulk cargo transportation within a few miles of each other. Perhaps the *Andaste's* final resting place will soon be discovered.

For the past eight years, MSRA has retained the services of David Trotter from Canton, Michigan, to conduct side-scan survey operations in search of lost ships in Lake Michigan. Keeping detailed records of nearly two hundred square miles scanned in eastern Lake Michigan, MSRA knew they had already covered almost half of the *Hennepin*'s probable search area during prior looking expeditions for other lost wrecks. In July 2006, Trotter covered the balance of the *Hennepin*'s search area extending east, north and west of areas already covered working in depths ranging from 190 feet to 250 feet. Running lanes in a pattern much like mowing a lawn, the 50 kHz torpedo-like sonar was towed 100 feet below the boat sending acoustical signals out to each side. The remaining twenty-five-square-mile search area was completed in just four days with no discoveries. Or so it appeared.

To be thorough, MSRA reviewed the rolls of sonar paper to check for any targets that might have been overlooked by the boat's crew. As the paper unrolled, an unusual "splotch" appeared. The image, although quite small and rough, suggested a man-made object because it had both density (revealed by a dark plot) and height (indicated by a white shadow). Usually a target like this would be plotted several times on site to obtain more detail, but it had been missed, probably during a crew shift. Meticulous recordkeeping pinpointed its size and location, but there was not enough detail to determine if it was the *Hennepin*--only a dive would tell.

One week after the discovery of the new shipwreck, MSRA's technical dive team made the first attempt to identify the wreck, which lay in 230 feet of water. The divers' tanks were filled with a special blend of gas to reduce the effects of "nitrogen narcosis," a condition caused by breathing nitrogen under pressure (similar to drinking several martinis). The gas, called tri-mix, replaces a percentage of nitrogen with helium, allowing divers a clear head at depth. After a twenty-minute dive and a forty-five-minute



Bob Underhill

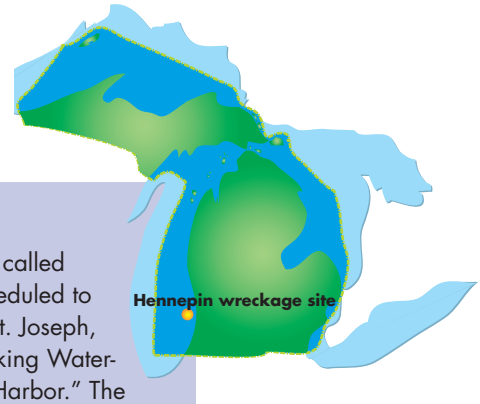
The block at the top of the *Hennepin's* A-frame remains secured in its position just as it was eighty years ago.

decompression, the divers returned with a positive identification of the *Hennepin*. The side scan had been deceiving; the wreck was in good condition, looking much like it had in historical photographs.

Today, self-unloaders, the dominant type of vessel on the Great Lakes, represent a multi-million-dollar bulk cargo industry. They deliver dozens of products like iron ore, coal and sand throughout the Great Lakes still using systems modeled after the first conveyor belt system fitted on the *Hennepin*. This historic shipwreck with its ground-breaking equipment is currently "on exhibit" 230 feet beneath Lake Michigan in an extraordinary underwater maritime museum. It serves as a reminder of the roots of an industry still flourishing after more than a century. **mh**

A writer, member of the Woman Divers Hall of Fame, and recipient of a 2007 Michigan State History Award, **Valerie Olson van Heest**'s Holland-based Michigan Shipwreck Research Associates (MSRA) explores and documents Great Lakes Shipwrecks. Her first young readers book, "Icebound – The Adventures of Young George Sheldon and the SS Michigan" has just been published. For more information, visit www.michiganshipwrecks.org.

To learn about another shipwreck discovery by MSRA, visit **www.michiganhistorymagazine.com** and click on "Icebound Found."



To Learn More About the *Hennepin*

The *Hennepin* will be featured in a new exhibit and book by the same name, called "From Hennepin to the Thousand Footers: The Rise of the Self-Unloaders" scheduled to open in the Spring of 2008 at the Heritage Museum and Cultural Center in St. Joseph, Michigan. This exhibit will be a companion to a larger exhibit entitled, "Working Waterfronts: Planning & Preserving the Maritime Traditions of St. Joseph & Benton Harbor." The project is being funded by a grant from the Michigan Humanities Council, the state's nonprofit affiliate of the National Endowment for the Humanities.

The shipwreck *Hennepin* has been nominated to the National Register of Historic Places. On September 14, 2007, the listing was approved by the State of Michigan and was forwarded to the National Park Service for processing. The wreck site of the world's first self-unloading vessel holds significant archaeological value. This marks the first vessel in the Michigan waters of Lake Michigan to be nominated to the National Register. It is a unique listing as it was completed so quickly after discovery. MSRA hopes that the listing will encourage future divers to be especially respectful of the significant vessel.