Wisconsin Underwater Archeology Association Coming Events

May 8, 1999	Spring Meeting of the Association in Sturgeon Bay Wisconsin. Business meeting in the morning. Tours of Palmer Johnson, Bay Shipbuilding and the U.S. Coast Guard station and cutter in the afternoon.
April 30-May 1, 1999	Site survey project at Bullhead Point in Sturgeon Bay. Will include mapping, photography and drafting.
July 1999	Survey project at Bailey's Harbor in Door County.

See the article on page 2 for more details and contact information for these events.

Other Events

April 10, 1999	Sole Survivor Show. The Sole Survivor of the Daniel J. Morrell Shipwreck will speak at the St. Paul History Center, 345 Kellogg Blvd W, St. Paul., MN. Will include underwater video of the wreck site. Sponsored by the Great Lakes Shipwreck Preservation Society. Tickets are $10 and are by mail from GLSPS, 7348 Symphony St. NE, Fridley, MN 55432. Proceeds will be used to fund various GLSPS shipwreck preservation projects. Specify the 5:30 or 8:00 pm show.

Wisconsin Underwater Archeological Association
P.O. Box 6081
Madison, WI 53716

Wisconsin Underwater Archeology Association

For those interested in the study and preservation of Wisconsin's underwater history and cultural resources.

Wisconsin's
UNDERWATER HERITAGE

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When Resources Collide: Archeology in the Mississippi River Valley

by Andy Jalbert

A survey of Wisconsin maritime and underwater archeology would not be complete without addressing the Mississippi River. "The big river" has played a vital role in the state's history and prehistory, serving as a cultural conduit connecting different races, languages and goods. Although only a relatively small portion of the Mississippi River drainage basin is found in the state, its presence makes Wisconsin a component of both an incredibly complex natural system that includes 29 other states, and a cultural history that spans nearly 10,000 years.

Physical Setting

For most people, the word "Mississippi" brings to mind visions of Mark Twain's river winding lazily through the country's interior from Minnesota to New Orleans. In fact, the Mississippi Drainage basin is an enormously complex system of tributaries, floodplains, channels, backwaters and man-made dams. The basin, which is the second largest in the world (smaller only than the Amazon River drainage basin in South America) is approximately twice the size of the Nile. Its main channel is 2,350 miles in length and its tributaries span north into Canada, west to Idaho, east to New York and south to the Gulf of Mexico where it discharges 612,000 cubic feet of water per second. The basin is so large and has so much impact on the environment that it creates its own weather system, the effects of which are felt all the way to the east coast of the United States.

from *Rising Tide* by John M. Barry

The Mississippi is divided into the Upper Mississippi River Valley (UMRV) and the Lower Mississippi River Valley (LMRV). The dividing point between the two lies at the confluence of the Ohio River and the Mississippi River near Cairo, Illinois. The Upper Mississippi and the Lower Mississippi are different in several ways, both naturally and man-made. Naturally, the lower Mississippi differs from the upper Mississippi in part because of the sheer volume of water it carries. Both the Ohio and the Missouri Rivers feed in to the main channel near Cairo, greatly increasing the water load in the main channel. This increased volume of water affects the dynamics of the river in several ways. Its channel tends to meander much greater distances within the LMRV. Where the Ohio River pours into the Mississippi, the river has been known to meander as far as 15 miles. The deepest portion of the Mississippi channel lies in the lower Mississippi between Baton Rouge and New Orleans where it has reached depths of well over 100 feet. Historically, flooding has been the most severe in the LMRV. Great floods such as the flood of 1927 displaced nearly a million people from Illinois and Missouri to the Gulf of Mexico.

Another significant difference between the upper and lower Mississippi river is the man-made lock and dam system. From Minneapolis,

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Wisconsin's
Underwater Heritage is published quarterly by the Wisconsin Underwater Archeology Association, a nonprofit association of individuals and organizations interested in studying and preserving the underwater cultural resources and historical sites of Wisconsin.

In addition to publishing this newsletter, the Association also holds semiannual meetings and provides support to members' research and publication projects. Annual membership dues are $15. For membership information, contact the secretary or write to the address below.

Send correspondence to:
WUAA
PO Box 6081
Madison, WI 53716

email: wuaa@mailbag.com
website:
www.mailbag.com/users/wuaa/

Association News & Events

Divers Gather to Study Great Lakes Shipping

On Saturday, February 27th, 1999, thirty five divers attended the workshop *Sail, Steam and the Profit Margin,* which was held at the Wisconsin Maritime Museum in Manitowoc. Dr. Bradley Rodgers proved to be an interesting instructor, leaving everyone with the impression that their knowledge of Great Lakes shipping increased dramatically. Certainly, the understanding and appreciation of the wrecks we dive has been improved. We congratulate Dr. Rodgers on doing a fine job and making the workshop worthwhile.

Plans are in the works for a workshop concentrating on steam engines that were used in early steamers. Considerations are being made to hold the event at the Army Corps of Engineers Visitor Center in Duluth. They have a full scale size steam engine that would be a perfect model for study. Member's input as to the feasibility of such a workshop would be appreciated. Contact Jeff Gray (608-264-6493) or send an email to us at wuaa@mailbag.com.

WUAA Spring Meeting

April 10th is out! Saturday, May 8th is the new meeting date!

The date has been changed for good reason. On May 8th Palmer Johnson (they build large aluminum yachts) and Bay Shipbuilders (they build and repair ore carriers and other ships) are hosting an open house. Yes! We can tour both facilities; the cost is $5.00 for both yards. People will also have an opportunity to visit the U.S. Coast Guard station and to check out the Coast Guard cutter – as long as it is not out on a call.

The business meeting will start at 10:00 am on Saturday, May 8th. It will be held at the new Door County Maritime Museum, 120 North Madison Avenue, Sturgeon Bay, WI. This is located near the Michigan Street bridge.

The shipyard tour is very popular and WUAA can purchase the tickets in advance. If you want to guarantee a spot at the tour let us know you are coming by sending $5.00 per person for tickets to WUAA Spring Meeting, P.O. Box 6081, Madison, WI 53716. If you have any questions contact Tom Villand (608-221-1996).

Bullhead Point Project

The week prior to the spring meeting we are planning to finish (!!) the Bullhead Point project. The date is set for Saturday, April 30th and Sunday May 1st, 1999. If you are interested in shallow water, easy access (and probably cold) wreck diving, let us know you are coming. Assistance is needed in surveying, drafting, photographing and writing the report.

Christina Nielson project

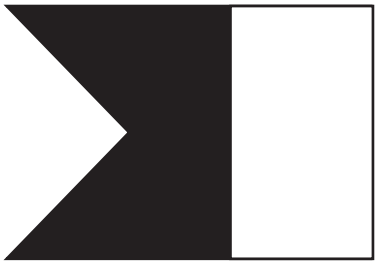
People who were involved in the Christina Nielson project, located near the lighthouse in Bailey's Harbor (Door County), had a great time last year. As we had planned, it will happen again this year. Exact details are to be worked out yet, but things should proceed in a similar fashion to last year. We have an opportunity to stay at the same cabin on Moonlight Bay and use boats to access the site. Last year we went on a side trip to the Frank O'Conner. If there is enough interest we can make a similar dive. Plans are that this will be a week long project sometime in July. If you are interested let us know early – there is only limited space. Contact Jeff Gray (608-264-6493) or send an email to us at wuaa@mailbag.com.

Show Your Colors

by Hank Whipple

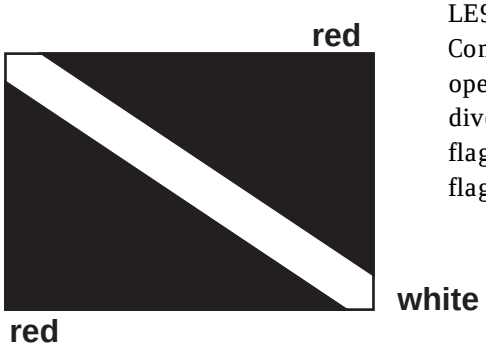
With diving and boating season fast approaching, here are some words of advice on displaying the dive flag.

On the Great Lakes and other federal waters, your dive boat while engaged in diving is required by federal Inland Navigation Rule 27 to identify itself and its activity. At night, this is done by displaying three, 360° lights in a vertical line

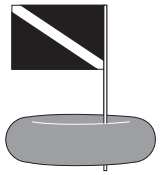


where they can best be seen. These lights are red, white and red. For daylight operations a rigid color code flag "A" is flown. This alpha flag is a navigational signal indicating the vessel's restricted maneuverability and does not pertain to the diver. The flag is a white and blue, swallow-tail flag at least one meter high and visible from any angle.

Divers have adopted a red flag with a white diagonal stripe which is legal in some states on sole state waters. In most states, including Wisconsin, the red flag does not have any legal status identifying the boat.



Wisconsin law requires the use of the red flag with the diagonal stripe to identify the diver in the water more than 150 feet from shore. This is to mark the diver's location not the dive boat per se. The "diver down" flag must be red, 12 inches high and 15 inches long with a diagonal 3 inch wide white stripe. It must be high enough above the water to be clearly apparent at a distance of 100 yards. Wisconsin, unlike federal rules, does not require that the dive boat be marked. It only requires that the dive location be identified. At night on sole state waters, the boat's white anchor light would be used.



Except in the case of an emergency, a Wisconsin diver may not surface outside a 50 foot radius from the diver down flag. (Wisconsin boating regulations, page 20, JG LE93.96, PUBL-LE-301 96rev).

A motor boat is prohibited on Wisconsin waters from operating within 100 feet of a diver down flag or a swimmer unless the boat is part of the diving operation (Wisconsin boating regulations, page 19, JG LE93.96, PUBL-LE-301 96rev). Consequently, the prudent diver when operating more than 50 feet from the dive boat should tow a diver down flag and surface within 50 feet of the flag.

New web site

www.mailbag.com/users/wuaa

The association has a new web page.Please check it out, we think you will find it interesting and useful. The site contains information on Association events and membership, past issues of *Wisconsin's Underwater Heritage*, and links to other related web sites.

We would like to thank Betsy True and Danny Aerts for setting up the new page. The association is very grateful to Brendon Baillod for the excellent job he did hosting the previous site.

The Association also has email service which can be used for inquiries about WUAA events, to request membership information, to contact association officers, or other member needs.

Our email address is:

wuaa@mailbag.com.

UW Sea Grant's New Address

The UW Sea Grant Institute has moved. The new address is:

Goodnight Hall
1975 Willow Drive
Madison, WI 53706
608-263-3259

Mississippi River *continued from page 1*

MN to Cairo, IL the US Army Corps of Engineers attempts to keep the channel 9 feet deep by operating a series of 29 locks and dams (Pools 4-12 are bordered by Wisconsin). As a result of this, the upper Mississippi River is actually a series of pools, not a free-flowing river. The purpose of these locks and dams is two-fold: to maintain a navigable channel (primarily for barges) and to lessen the impacts of flood waters. Generally speaking, although there would be natural fluctuation in the river level, it would be lower if not for the locks and dams. While this may in fact aid in navigation and to some extent control the flood waters, the river is no longer allowed to function as a natural system. Consequently, wildlife habitat in several areas has been impacted, particularly in the backwaters.

Humans in the Mississippi River

The Mississippi River Valley (MRV) is an incredibly wealthy source of natural resources. In its entirety, the river valley provides habitat for 240 fish species and 37 mussel species. It sustains over 5 million acres of forested wetlands and 40% of the nations migratory waterfowl use it for their flyway. These natural resources together with the navigational and transportational benefits of the river have made it a rich resource base for humans. Archeological evidence suggests that humans first started tapping this resource in Wisconsin as far back as 10,000 years during an epoch named the Pleistocene.

Paleo-Indian Tradition

These first humans to arrive in the Mississippi River Valley are referred to as Paleo-Indians. The Paleo-Indian culture marks the earliest record of prehistoric occupation in America. Descendants of the Eurasian nomads who entered North America across the Bering Straits during times of lower sea level, these people are associated with the presence of glaciers and megafauna such as Woolly Mammoths and Mastodons. They traveled in small, mobile bands, and are defined archeologically by specific stone tools and an absence of pottery. Paleo-Indians sites discovered in-situ (in context) in Wisconsin are very few in number. Only two have been located along the Mississippi River. However, many more paleo-indian artifacts have been discovered out of context along the river.

Archaic Tradition

A new culture starts showing up along the Mississippi River in Wisconsin around 8,000 years ago. These people, belonging to a tradition referred to as the Archaic, had a subsistence based entirely on the hunting and gathering of modern plants and animals. These people still did not manufacture ceramic vessels of any sort but are marked instead by various diagnostic stemmed and notched arrow and spear points. This period also marks the burial of the dead, however not in mounds. More Archaic sites are present along the Mississippi than Paleo-Indian sites, however they are still relatively few in number.

Woodland Tradition

Prehistoric culture flourished along the Mississippi in Wisconsin between approximately 2,500 years ago and 1,000 years ago in what is referred to as the Woodland culture. In fact, a majority of the prehistoric archeological sites discovered along the Mississippi in Wisconsin are Woodland Indian sites. Woodland tradition is marked by pottery manufacture, earthen burial mound construction, diagnostic stone points and plant cultivation. The Mississippi provided Woodland people with an enormous amount of natural resources as well as routes for travel and trade. Fish and mussels were utilized extensively and large middens (garbage heaps) were left behind, many of which are still visible today. The Woodland people used the Mississippi shorelines and islands for burial of their dead and as sites for the construction of mounds. Several of these mounds have been preserved and can be seen in places such as Effigy Mound State park, atop the bluffs on the Iowa side of the Mississippi River near Prairie du Chien.

The Mississippi River Valley is an incredibly wealthy source of natural resources. ... These natural resources together with the navigational and transportational benefits of the river have made it a rich resource base for humans.

The Mississippian Culture and Cahokia

Near the confluence of the Mississippi, Missouri and Illinois Rivers, on an enormous fertile floodplain referred to as the American Bottoms, the largest and most com-

plex prehistoric society in North America flourished nearly a thousand years ago. These people, referred to as Mississippians took full advantage of the floodplain's fertile soil and vast supply of natural resources. The Mississippian culture was based primarily on agriculture, more specifically, the cultivation of corn. With this more sedentary life style, the Mississippian people lept forward in other aspects of their civilization including the development of more complex social and religious hierarchies, and the production of more refined goods. Perhaps the most recognizable mark of the Mississippian culture is the construction of enormous earthen mounds such as those built within the city of Cahokia.

Cahokia was the central city of the Mississippian culture. At its height in AD 1150, the city's population reached 20,000 people. The mounds, including Monk's mound which covers 14 acres and stands over 100 feet tall, are still visible today, preserved within the Cahokia Mounds State Historic site just outside of St. Louis. A museum and interpretive center are also on site, and tours are available. Cahokia's influence has spread as far south as Florida and as far north as Aztalan in Wisconsin.

Historic Native Americans

Historic Native Americans were not strangers to the Mississippi River Valley. The river provided a rich resource base for food and an excellent means for transportation. The earliest written record of a recognizable Native American people (most likely the Eastern Dakota) in the Upper Mississippi River Valley comes around 1642. The Huron, Ottawa and Menominee (to name a few) utilized the UMRV extensively also.

Fur Traders

As early as the 1630's, the fur trade in the UMRV was becoming one of the dominant economic pursuits in the new world. The French were the first to tap this resource, followed by the British and ultimately the Americans. This industry, driven by European fashion could be very lucrative as well as dangerous. Large trading posts and forts were built along the river to accommodate the trade.

Transportation on the Mississippi

The MRV, in particular the Missouri River, was used for the transportation of goods to the west. Steamboats carried cargo, including supplies for military troops, as far west as Montana since 1819.

Today, huge strings of barges pushed by tugs are a common scene on the Mississippi River. These barges are used to carry everything from coal, gravel, grain and various other bulk goods.

Archeological Sites in and Along the Mississippi

There has been an enormous amount of human activity on and along the shores of the prehistoric, historic and modern Mississippi River, translating to a very high archeological site density. It is important to note however, that the channel of the Mississippi River today is not necessarily in the same location as it was in the last millennium, the last century or even the last decade. The dynamics of the Mississippi have changed significantly through time, causing the river's course to change. This in tandem with the erosional and depositional characteristics of the river (historically, the Mississippi's depositional average is approximately 2 million tons per day) raises some interesting issues about the archeological sites along and in the river. In terms of locating, testing and ultimately preserving these archeological sites in and along the Mississippi River, there are some distinct advantages, disadvantages and challenges. Sites in this environment are subject to a number of factors (both natural and man-made) that are not a concern to many inland sites.

Sedimentation for instance can facilitate the preservation of archeological sites. One of the best examples of this is the Steamship *Arabia* in Kansas City, MO. The *Arabia* was a 171 foot "packet" steamer that hit a snag and went down in the Missouri River 1856. Due to the shallowness of the river, she only sank to her upper deck, making escape for the passengers easy. Within a few days however, she had sunk into the silt and was completely under water. As the winding channel of the Missouri changed course through time the *Arabia* was slowly covered by sediment and by 1877 she was no longer in the river channel but instead was buried under what was now the river bank. The river's course continued to change and when the *Arabia* was finally excavated in 1987, she was under 46 feet of sediment in a farm field next to the river.

Needless to say, the preservation of the *Arabia* and its cargo was spectacular. Clothes, food, spices, cognac, jewelry and assorted tools were all preserved due to their rapid burial. Although the river environment helped preserve this particular archeological site, it also made it very difficult to locate and incredibly challenging to excavate. The *Arabia* laid under 46 feet of sediment which in and of itself makes for a laborious recovery. Adding to the difficulty was the fact

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Mississippi River *continued from page 5*

that the water table was only 10 feet below the surface. Excavating the *Arabia* proved to be quite expensive, requiring not only archeologists, but well drillers (20,000 gallons of water was pumped out of the excavation hole daily), crane operators (a 100 ton crane was on site for the excavation) and numerous other heavy equipment operators to remove 200,000 cubic meters of sand and silt. A number of the artifacts recovered from the ship as well as more information about the excavation can be found at The *Arabia* Steamboat Museum in Kansas City.

While the up-side to river valley sites is the potential burial and increased preservation, it is important to keep in mind that all of the sediment burying these sites has to come from somewhere up river. This sediment is removed by erosion. A walk along the banks of the Mississippi in Wisconsin will clearly illustrate the erosional ability of the river, especially when man-made dams are part of the system. The water level in between these dams is lowered and raised artificially by the Corps of Engineers (COE) to accommodate navigational needs and recreational activities such as duck hunting. Acres of shore line trees have died and fallen into the river because the soil in which they are rooted has washed away. While this erosion greatly hinders the preservation of shoreline sites, it makes locating and collecting them much easier. The shorelines of several islands near Prairie du Chien for example, are littered with pottery sherds, chert flakes and other stone tools. The erosional/depositional processes of the river affect sites like these in an opposite manner than sites such as the Arabia. These particular sites which are terrestrial in origin, are slowly eroding into the water. Unfortunately, once this happens their context is forever lost.

Another threat to these eroding sites is collectors. Unfortunately, because so many of these sites are exposed, finding them and taking the artifacts is not very challenging. And with the shorelines constantly eroding, new material is regularly exposed. Although permits are technically required to collect these areas, private collections containing literally thousands of artifacts are commonplace. Fortunately, some of the collectors have kept track of the artifact's original location and have worked together with archeologists to report these sites.

Specialized methods have been developed for locating and testing sites in these dynamic river valley environments. In the case of the Arabia, remote sensing equipment such as magnetometers were used to located the anomaly under the sediment. Soil coring has become an important tool to help understand the sedimentalogical history of a particular area. Mechanized samplers such geoprobes and vibracores have proven useful in taking deep cores along the river banks. By defining the sedimentalogical history, buried soils, and undisturbed living surfaces can be located. While this does not help with the sites that are already exposed on the surface, the data generated can be useful in creating a management plan for the preservation of sites which have not yet been disturbed.

A number of sites are still at least partially in context within the river channel. Several steamships have been lost on the Mississippi and in some cases have sunk into the river bed. Ships such as the *War Eagle* in the Black River near LaCrosse are still preserved largely in context. However, even submerged sites in the river are subject to currents, battery by debris and erosion. And of course, as anyone who has been diving in the Mississippi River will tell you, conditions are usually zero visibility and riddled with unpredictable currents, making mapping and recovery of these sites very difficult.

Although developing a management plan for these sites is important (the COE has attempted to keep databases of these sites including degree of disturbance, research priority, etc.) the forces to be contended with are largely natural ones. Historically, man has tried to control the river for a number of reasons ranging from transportation to flood control and although successful to a limited degree, attempting to manipulate the river is filled with risk. For years, people have lived on floodplains protected by man made levees (the flood of 1927 was testament to the potentially catastrophic ramifications of this), used it for transportation in vessels too large for the river's natural state, and attempted to contain it and even redirect its flow.

With regards to cultural resource management along the river, perhaps the best game plan is to make a push for more extensive survey and research. Once these sites are gone, they cannot be restored. The river however, has no intentions of accommodating the preservationists. In the words of Army Engineer D.O. Elliot, "At its head, the river is held in place by the gorge in the Commerce Hills. Its mouth in the Gulf of Mexico is fixed by the works of man. Between these points it writhes like an imprisoned snake, seeking to establish and maintain a state of equilibrium between its length and the volume and velocity of its discharge..."

Member News

John Jensen, WUAA member and past acting underwater archeologist for the State Historical Society of Wisconsin, has accepted a position at Williams College - Mystic Seaport, in Mystic, Connecticut. The position is a a two-year faculty appointment, the Robert G. Stone, Jr. Fellowship in American Maritime History. He will also hold an appointment in the Department of History at Williams College.

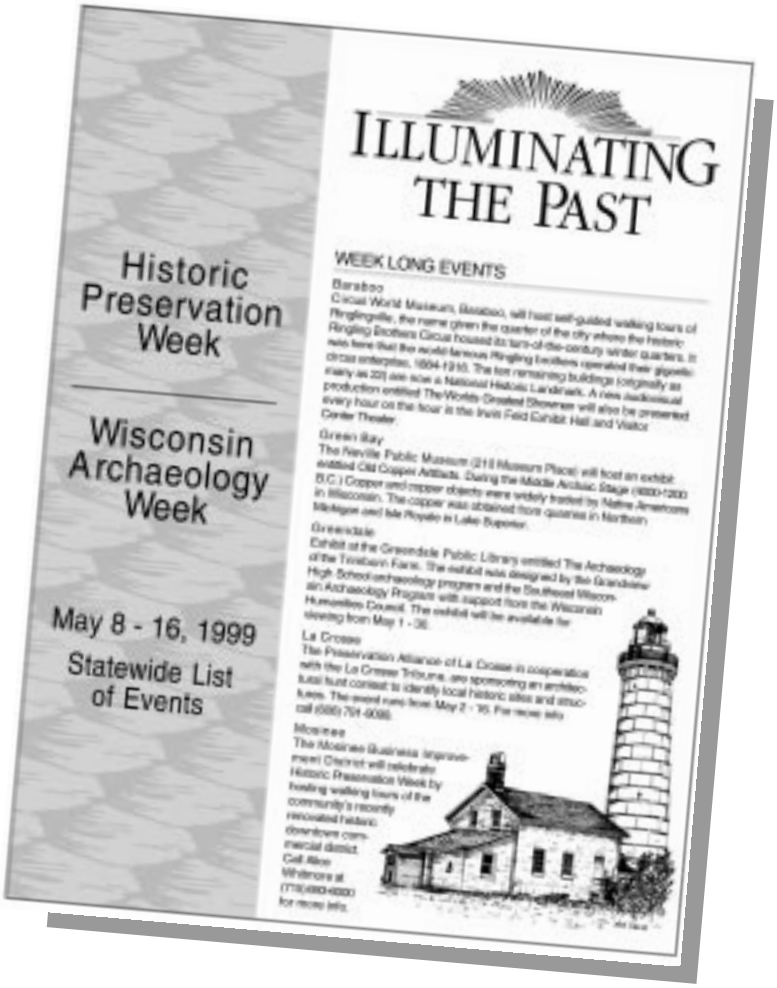
John's new duties will include teaching a seminar in American Maritime History each semester in the Williams-Mystic Maritime Studies Program. This course traces the history of America,s relationship to the sea from the age of discovery through the heyday of merchant sail to the advent of steam and the maritime developments of the 20th century. The course includes a material culture component, utilizing the rich resources of Mystic Seaport's collections.

John will also be able to pursue research and writing, as he will have full research access to the collections and materials of Mystic Seaport, including the million-document G.W. Blunt White Library. We wish John well at this new position.

Historic Preservation and Wisconsin Archeology Week

Celebrate Historic Preservation Week and Wisconsin Archeology Week, May 8 to 16. Historic preservation advocates and archeologists are holding a series of events in every part of Wisconsin. You may remember last year's sesquicentennial celebration that featured the palace steamer *Niagara* on Wisconsin's Archeology Week poster. Maritime enthusiasts will be equally delighted with this year's theme for Historic Preservation Week, "Illuminating the Past". A special poster and bookmark will feature Wisconsin lighthouses, while Archeology Week's poster and bookmark will feature copper artifacts from Wisconsin. Although these are the themes of this year's Archeology and Historic Preservation Week, there will be events on a variety of topics. On the list of events is the WUAA Spring meeting in Sturgeon Bay on May 8.

For calendars or other information contact the Division of Historic Preservation at 608-264-6500 or visit their web site at http://shsw.wisc.edu/website/arch/archaeology-week.htm



The Great Lakes Alliance of Water Safety

Dedicated to scuba diver safety in the Great Lakes

In the spring of 1998 a number of people with a common interest came together in an informal meeting hosted by the U.S. Coast Guard Marine Safety Office in Milwaukee, Wisconsin. Their common interest was the safety of recreational scuba divers in the waters of Lake Michigan off the coast of Wisconsin. The group included then, as it does to this day, several of Southeastern Wisconsin's dive shop owners, dive charter boat owner/operators, dive instructors, law enforcement and fire department dive rescue teams, St. Luke's Hospital (Milwaukee) Hyperbaric Medicine Department, State Historical Society of Wisconsin, the Wisconsin Department of Natural Resources, as well as U.S. Coast Guard Search and Rescue and Marine Safety Office representatives. From the initial meetings there arose a common desire to establish a formal, yet loosely knit group. That group elected a chairperson and secretary and adopted the name Great Lakes Alliance of Water Safety, or GLAWS.

Over the course of the past year GLAWS has developed a float plan, a captain's checklist and a list of shipwrecks frequented by local divers, all with an eye towards improving safety. The float plan can be used by any recreational boater and charter boat operation. When left with a responsible party shore-side it provides valuable background information the Coast Guard can use should a search become necessary. The captain's checklist, while geared toward the charter boat operations, can be used by any boater as a simple means of ensuring common safety guidelines are followed. The list of shipwrecks provides their common names, location (by latitude and longitude), and depth. In addition, each wreck is assigned a number. This number can act as a simple point of reference in an emergency should persons other than crewmembers need to communicate what wreck their boat is on to emergency responders.

Over that same time period a committee has met to review emergency response procedures should the need arise. While diving in Lake Michigan any call for help should go initially to the Coast Guard. However, local assets (sheriff, police, fire or DNR) may be the first to respond. Because diving accidents require special medical attention it was felt there needed to be a set procedure to be followed by any first responder. GLAWS has worked with the Coast Guard to establish that procedure. Efforts are currently underway to inform all first response assets along Lake Michigan's coast of Wisconsin of this procedure.

In addition, GLAWS is actively working with the State Historical Society of Wisconsin in the efforts to put safe moorings on several shipwreck sites. These moorings would provide positive identification of dive sites, as well as provide secure means of positioning the dive boat over the wreck without dropping an anchor or tying off to the wreck itself. Both methods tend to damage these fragile historical sites.

Meetings are held the third Thursday of each month from 9:00 to 10:30 am, at the U.S. Coast Guard Marine Safety Office in Milwaukee (2420 S. Lincoln Memorial Dr.). Membership is not limited to the specific disciplines listed above. Any persons with an interest in promoting the safety of recreational scuba divers are welcome to attend and contribute what they can of themselves. There are no membership applications or fees, no minimum attendance requirements. Those members who have agreed to act as an Advisory Board have obligated themselves to attend as many meetings as is physically possible. Everyone else is encouraged to attend as often as they can. For further information please call Richard Bennett, Board Chairman, at 414-871-7315.

Conrad W. Zvara
Lieutenant Commander
U.S. Coast Guard Reserve
Marine Safety Office Milwaukee
GLAWS Advisory Board Member

The Search for the Linda E

by Paul J. Creviere Jr.

Our list of vessels "Gone Missing" grew by one, last December 11th, when the 42 foot fishtug *Linda E* disappeared with all hands somewhere off the Lake Michigan community of Port Washington. The *Linda E*, a steel vessel, diesel powered and built in the 1930s was manned by owner and captain Leif Weborg, his son-in-law, Scott Matta, and Warren Olson.

Calling by cellphone at 9:30 that Friday morning, Weborg contacted Smith Brother's Food Service in Port Washington to let them know that the *Linda E* had netted 1,000 pounds of lake chubs. They were about six miles off shore, nine and a half miles south of Port Washington and were headed for home. When the *Linda E* failed to make port by late that evening, authorities were notified. The Coast Guard, with the help of five search vessels, three helicopters and two Army planes began scouring what would become a 3,000 square mile search area. A jet from Cape Cod, MA joined the search as did an Air Force cargo plane, the Wisconsin DNR and even the Canadian Air Force. Volunteers walked the beaches looking for wreckage. Fisherman scanned the lake bottom with sonar. Coast Guard cutters and aircraft inspected the lake for oil slicks. No trace of the fish tug could be found.

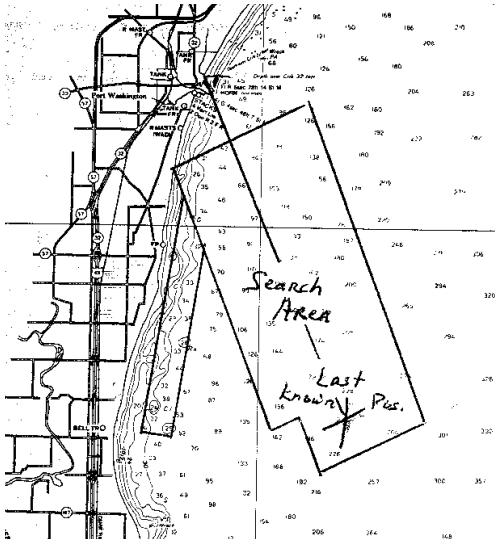
The case was turned over to the Marine Safety Office and a Fond Du Lac company, Superior Special Service, was brought in to search the area with sidescan sonar. They found a wreck but inspection with underwater cameras showed the wreck to be that of a 19th century schooner.

The case of the missing *Linda E* has launched dozens of theories, some quite plausible, some unlikely, some down right ridiculous. Those unfamiliar with the maritime world, (or perhaps the world in general) have blamed the loss of the fishtug on UFOs, "a drug deal that went sour", the thee fishermen scuttling their boat and running away from soaring debts, and my own favorite, "Pirates".

Many commercial fishermen think the *Linda E* was run over by a string of barges pushed from behind by a tug. Such barges were making use of the mild weather at the time. With no visibility immediately in front of them, a line of barges, 300 feet long and measuring thousands of tons could hit a fishtug measuring only 20 tons and never even realize it. Weborg, Matta and Olson were probably cruising on auto pilot while they cleaned the 1,000 pounds of chubs they were going to deliver in about an hour and may have been as oblivious to an approaching barge as it would be to them. This is being checked out by Safety Office investigators, so far with out results.

Another possibility might be a collision with flotsam. Several weeks before, the *Linda E* disappeared, a major wind storm blew through the area, whipping up the lake into a wind swept frenzy. Storms like this can wash trees, pieces of piers, and other forms of junk into the lake. Old dock pilings, dense and heavy with water, float low on the surface. It is not uncommon for unsuspecting vessels to be damaged, impaled, or ripped open by running upon unseen obstacles.

Clark Willick, diver, marine researcher and sidescan sonar operator (as well as a WUAA member) is familiar with the people looking for the *Linda E*. Willick feels that the fish tug,



which had been leaking from old age, was beefed up with additional steel plates welded over the old hull. This procedure, called "sister plating", adds a lot of weight to a vessel. So much so, that in this case, the *Linda E* had only a foot and a half of clearance between her stern railing and the water. Adding a cargo of a half ton of chubs would leave the tug sitting so low in the water that she could be simply swamped by a large wave.

Willick maintains that even with sidescan sonar, searchers can easily miss a target the size of the *Linda E*. Searching too fast or hitting a target too far away can render a wreck indistinguishable. Likewise, running with a side scan sensor too shallow can leave a blind spot directly beneath the search boat. Other efforts are being made to locate the fishtug and the missing fishermen. If, by March, nothing is found, Clark will throw his hat into the ring. He has already added necessary electronic equipment, and arranged for a crew to help him look for the *Linda E*.

The search continues.

Kewaunee Enterprise, December 17, 24, 1998.

Milwaukee Journal, December 16, 17, 22, 28, 1998.

Telephone interview with Clark Willick, February 28, 1999.