

Coming Events

March 25, 2000 **Ghost Ships Festival**, 10 am-9 pm, Centennial Hall, Milwaukee Public Library. Sponsored by the Great Lakes Shipwreck Research Foundation. Contact GLSRF, P.O. Box 070887, Milwaukee, WI, 53207.

March 25, 2000 **Wisconsin Underwater Archeology Association Spring Business Meeting**, 9 to 10 am, Milwaukee Public Library. Contact Jeff Gray at 608-271-1382.

April 8, 2000 **Toward An Understanding Of Wooden Ships**, Manitowoc at the Inn on Maritime Bay, from 9:30 am to 3 pm. Presented by Pat Labadie and sponsored by the WUAA. Contact Tom Villand at 608-221-1996 or Danny Aerts at 608-233-2066.

May 16-18, 2000 **LaSalle's Lost Ship, the Excavation of the *La Belle***, Superior, Green Bay and Madison. Presented by Steve Hoyt and sponsored by the State Historical Society and the WUAA. Contact Fil Ronca at 608-271-1382.

May 13-21, 2000 **Wisconsin Historic Preservation Week**, various activities and programs throughout the state. Check the National Trust for Historic Preservation's Preservation Week website at www.nthp.org/main/preservationweek/preservation_week.htm

Sep. 23, 2000 **Brown and Blue Water Navies in the Civil War**, a symposium and reenactment, at the Chicago Historical Society, 1601 North Clark Street, Chicago, IL 60614. Contact Ms. Amy Woodward, 312-642-4600.

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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A publication of the Wisconsin Underwater Archeology Association

March 2000

Shipwrecks in Review

by Dr. Richard Boyd

Once again we review ongoing events and notable recent happenings which involve shipwrecks and related underwater archeology. While emphasis is placed upon the Great Lakes region, important discoveries or projects occurring around the globe are frequently described. Archeologically speaking, this is been a rather quiet period on the Great Lakes, whereas developments elsewhere in the world have been brisk, especially on the legal/political fronts.

In eastern Lake Michigan, the current low water levels have exposed the hull of the *Minnehaha*, a 119-year old, four masted schooner which stranded near Arcadia, MI, in 1893. The 200-foot vessel had been converted to a schooner-barge and was under tow to Point Edward, Ontario, with 58,000 bushels of corn. The ships encountered a nasty northwest storm off Point Betsie which eventually separated the steamer from her consort. The steamer escaped destruction, but the *Minnehaha* was blown into shallow water and broken apart. Remnants of the vessel were last detected during an episode of low water in 1930's.

In the Chicago River in December, a dive team from the Underwater Archeological Society of Chicago investigated the murky underwater

It Grows in Trees: Wisconsin Lumber Industry, Part I

by Jeff Gray

Wisconsin divers frequently encounter slabwood, logs, timber, lumber, tools, docks, ships and other physical remains associated with the lumber industry. These artifacts are important reminders of an industry that played a crucial role in the development of Wisconsin and the Great Lakes region. Today, underwater archeological sites throughout the state (shipwrecks and lumbering and logging sites) take us back to a time when the ring of loggers' axes and the hum of whirling saws echoed across the landscape. The following article has been modified from the underwater archeo-

logical report on the Claflin Point Site, in Little Sturgeon, Wisconsin, which was listed to the National Register of Historic Places on January 18, 2000. A major component of this site is its association with the lumber industry. This article is the first of a series on lumbering in Wisconsin and how it relates to underwater archeology and maritime history.

They looked down on ... a dark, illimitable expanse of wilderness. It was a sea of solid treetops broken only by some gash where deep beneath the foliage an unknown stream made its way. As far as the eye could reach, this lonely forest sea

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photo courtesy of the Wisconsin Maritime Museum



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WUAA Spring Business Meeting

The Wisconsin Underwater Archeology Association spring meeting will be held in Milwaukee at the public library. We had been invited to hold our business meeting on the same day (and the same place) as the Ghost Ship Film Festival. We will get an early start and take care of our business, then break for the various activities.

Location:

Frank P. Zeidler Humanities Room
Milwaukee Public Library
814 W. Wisconsin Ave.
Milwaukee, WI

Date and Time:

March 25, 2000

The meeting will start promptly at 9:00 am and will continue until we join the Ghost Ship activities.

WUAA Spring Workshop

As noted in the enclosed flyer Mr. A.C. Patrick Labadie of the Duluth Canal Park Museum will conduct a training workshop for the Association on April 8, 2000. The subject will be the evolution of ship design and construction on the Great Lakes.

Location:

Inn on Maritime Bay
101 Maritime Drive
Manitowoc, Wisconsin

Date and Time:

Saturday, April 8, 2000
9:30 am - 3:00 pm

Cost of the workshop:

\$35 for WUAA members
\$45 for non-members

The price covers the workshop, classroom materials, morning coffee and bagels and a lunch buffet. Participants also receive admission to the Wisconsin Maritime Museum.

A limited number of rooms have been set aside at the Inn for this event for both Friday and Saturday nights. To make room reservations please call 800-682-7000 and mention the WUAA Workshop for the special rate.

Please reserve your spot soon by contacting either Tom Villand (608-221-1996, tvill@chorus.net) or Danny Aerts (608-233-2066, djaerts@fac-staff.wisc.edu). Or mail your name, address, phone and registration fee to:

WUAA Workshop
P.O. Box 6081
Madison, WI 53716

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.

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LaSalle's Lost Ship: The Excavation of La Belle

As part of Archeology and Historic Preservation Week, the State Historical Society of Wisconsin and the Wisconsin Underwater Archeology Association are sponsoring a program presented by Steve Hoyt, from the Texas Historical Commission, on the excavation of French explorer Rene de LaSalle's ship, *La Belle*.

La Belle was one of a fleet of four vessels brought to the Gulf of Mexico by La Salle in 1684 to establish a French colony at the mouth of the Mississippi River. LaSalle, hailed by some scholars as a hero and by others as an incompetent leader, was a man driven by a powerful desire for honor that he pursued with a remarkable sense of purpose. He spent ten years on a trading mission in the Great Lakes before embarking on his colonizing mission in Spanish territory. LaSalle's mission was doomed from the start and his own men eventually murdered him in 1687. The final great disaster prior to his death was the loss of *La Belle*, his only remaining vessel of the original four. The ship sank in

Matagorda Bay, Texas, with last of the colony's supplies, ending LaSalle's great colonial experiment.

The Texas Historical Commission discovered the wreck of *La Belle* in 1995 and conducted the excavation in 1996/1997. The excavation was conducted in a cofferdam in the middle of Matagorda Bay. The *La Belle* is one of the most important shipwreck excavations in North America, both because of the significance of the vessel and the groundbreaking techniques used in the excavation and conservation. Approximately one million artifacts were recovered during the excavation, including 35 percent of the hull, three bronze cannons, millions of glass beads and even the skeleton of a crew member. Mr. Hoyt will give an illustrated presentation about La Salle's history in Canada and Texas, the discovery and excavation of *La Belle*, the conservation of the hull and artifacts and the archeological evidence of LaSalle's odyssey in Texas.

During an earlier Great Lakes expedition, in 1679, another LaSalle ship, the *Griffon*, disappeared, giving the *La Belle* project a Wisconsin connection.

Steve Hoyt is the State Marine Archeologist with the Texas Historical Commission, the state agency responsible for the protection and preservation of historic and prehistoric resources in Texas.

For more information about these events see
<http://www.mailbag.com/users/wuua/>
 or contact Fil Ronca at
roncaf@MAIL.SHSW.WISC.EDU



La Belle excavation site
 photo courtesy Texas Historical Commission

The planned schedule for the *La Belle* presentations are:

Superior

May 16, 2000
 7:00 pm
 UW Superior
 Katheryn Ohman Theater
 call 715-394-8332

Green Bay

May 17, 2000
 7:00 pm
 Brown County Library
 call 920-448-4400 ext. 394

Madison

May 18, 2000
 7:00 pm
 State Historical Society
 Auditorium
 call 608-271-8172

Archeology Week Events

The State Historical Society of Wisconsin's Division of Historic Preservation is sponsoring the annual Archeology and Historic Preservation Week from May 13-21, 2000. For more information on Archeology Week activities and programs throughout the state check the National Trust for Historic Preservation's Preservation Week website at www.nthp.org/main/preservation-week/preservation_week.htm



site of the horrendous *Eastland* accident. The *Eastland* tragedy occurred in July of 1915 when the 269-foot steamer was preparing to transport 2,500 people to a company picnic. Due to overcrowding made worse by a top-heavy design, the vessel suddenly rolled over and sank, trapping and drowning 844 people...the worst maritime disaster in the history of American Great Lakes shipping.

In recent years it was speculated that many artifacts from the sinking might be resting upon the river bottom. Many stories persist about persons losing important personal possessions during the calamity. Thus the dive team combed the silty bottom-lands in zero visibility, searching for these historical memorabilia. A variety of interesting items and assorted garbage was recovered, but nothing associated with the *Eastland*. Heavy siltation over the years has probably put most artifacts out of reach unless dredging is undertaken.

While not exactly an archeological entity, the former Canadian Forces deep dive vessel *Cormorant* may become stationed at St. Ignace, MI, on the Straits of Mackinac. Divers will recall that several years ago, the *Cormorant* was the flagship during the raising of the *Edmund Fitzgerald's* bell, but the Canadian government retired the salvage ship shortly thereafter. Prospective new owners hope to

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use the vessel each summer for continued deep exploration of the Lakes and also as the focal point for a new conference and tourist center adjacent to its dockage area.

Regarding the *Edmund Fitzgerald*, a graveside consecration ceremony was held in mid-July over the site of that sinking. The Coast Guard ice-breaker *Mackinaw* transported over 200 relatives of the lost crew to the site off Whitefish Point in hopes of bringing about a "final closure" to this tragedy for the families. A moratorium to prevent further diving on the shipwreck was proposed by officially designating it as a gravesite.

Also on Lake Superior, a summer expedition was scheduled to search for two French naval vessels mysteriously lost almost 80 years ago.

Also on Lake Superior, a summer expedition was scheduled to search for two French naval vessels mysteriously lost almost 80 years ago. Three minesweepers, each 143 feet in length, were completed in Thunder Bay in November of 1918, and rushed to vacate the Lakes before freeze up. With the *Sebastopol* leading the way and the *Inkerman* and *Cerisoles* following, the convoy headed for the Sault and into a rugged fall storm that swept the eastern lake. The *Sebastopol* reached the locks, but the other ships did not. Their fate is one of the great puzzles of Lake Superior shipping.

For years it has been speculated that the minesweepers might have hit Superior Shoals, a remote reef in the central lake. This shallow obstruction was not discovered until 1929, and conjecture suggests certain "ghost

ships" may be resting there, including the minesweepers. The Great Lakes Shipwreck Society from Whitefish Point Museum had planned to conduct a sonar search of the area, but unfortunately the expedition had to be put off until next year due to inclement summer weather.

Destructive obsession with a Lake Superior shipwreck is the subject of a new Canadian film documentary called *Drowning in Dreams*. It tells the story of Fred Broennie, a Thunder Bay millionaire, who became fascinated with the famous sunken yacht *Gunilda*, and made it his lifelong mission to raise her. This obsession cost him his home, his business, several wives and the life of his close friend, King Hague, who died diving the wreck in 1971. The 72-minute film was produced for the National Film Board of Canada and premiered on TV Ontario last spring.

Over on Lake Huron, the controversial effort continues to place Thunder Bay and its many shipwrecks within a federal marine sanctuary. The NOAA proposal was first announced over six years ago, but was dealt a setback in 1997 when residents of Alpena, MI, voted against the designation, fearing excessive federal control over matters such as fishing, boating and tourism. However, the release this past summer of a favorable environmental impact statement has rekindled positive interest in the sanctuary, and a go-ahead by NOAA now seems likely.

In other historical preservation activity, a Bay City, MI, wreck diver has purchased Granite Island on Lake Superior. This remote property, 10 miles north of Marquette, is a 2.5 acre, rocky islet with a lighthouse built in 1868. Scott Holman, who once ran a dive shop in Marquette, bought the island for \$86,000 and plans to

renovate the lighthouse and open it for tours.

Another mysterious wreck found recently in Lake Erie has been tentatively identified as the *St. James*, a wooden grain carrier lost in October, 1870. The intact "ghost ship" rests upright in 160 feet of water off Ontario's Long Point in Canadian waters. The vessel is not listed on any casualty record, so how she sank or what became of her seven man crew is presently unknown.

Following Wisconsin's lead, volunteers for the Erie Quest Marine Heritage Area placed anchor blocks and buoys on 15 shipwrecks in the Pelee Passage region of Lake Erie. To enhance amateur diving activity, the group also sank a 1950's vintage, 38-foot powerboat in 35 feet of water. It rests next to the *George Stone*, a wooden steamer which sank in 1909.

In a similar endeavor, a Canadian group located near Fathom Five Park on Georgian Bay is planning to sink a 68-year old dredge just outside the park boundaries. It's hoped that this will help rejuvenate diving activity within the area which has been declining in recent years. Fathom Five was the archetype for Great Lakes maritime preserves and has been in existence for about 30 years. The group is seeking some \$60,000 in funding for the project.

Out on Lake Ontario, the discovery of an unidentified wreck off St. Catharines has been announced by Jim and Wendy Garrington. The well-preserved vessel was first detected in 1991, but was not explored until 1996 and not publicly disclosed until now. It is believed to be the *Henry Clay*, a sailing craft lost in 1831. The Garringtons have proposed a two year study of the ship and have personally pledged C\$84,000 toward that end; the city of St. Catharines has also kicked in C\$40,000. Another

C\$62,000 is being sought from Canadian federal government millennium funds.

Further out the St. Lawrence Seaway is the site of Canada's worst maritime disaster...the sinking of the *Empress of Ireland* in 1914. This 554-foot vessel was bound to Liverpool when it collided with another ship and sank in 14 minutes, taking 1,012 of the 1,500 passengers and crew down with her. Besides being a popular site for sport divers, the wreck has often been of interest to commercial divers since she carried a cargo of nickel ingots, today valued at C\$1 million. Recently, a Canadian salvage company formulated plans to dynamite the hull to retrieve these ingots, prompting the Province of Quebec to officially declare the wreck a protected historical and archeological site. Over the years, the wreck has been heavily plundered by souvenir hunters and metal salvagers.

Out on Lake Ontario, the discovery of an unidentified wreck off St. Catharines ... is believed to be the Henry Clay, a sailing craft lost in 1831.

Down in Florida came the announcement last fall of the discovery of a 300-year old Spanish merchant vessel only a half mile off St. Augustine. Found by the Southern Oceans Archeological Research group, the vessel lies in only 27 feet of water and is largely buried in sand, although some cannons and several anchors are visible. Indications are that the ship was about 120 feet in length and that intact hull and deck structures exist beneath the sand cover. Speculation suggests that the cargo carrier sailed out of Cuba and sank in a storm sometime between 1670 and 1730. Further archeological

investigation is underway.

On the legal front, a number of interesting situations have occurred. Three Michigan men have been charged with pilfering artifacts from the steamer *New York*, sunk within the Sanilac Shores Underwater Preserve on Lake Huron. Over Labor Day weekend, a patrolling Michigan DNR officer received a report of illegal activity at the wreck site where witnesses had observed a lift bag surfacing with contraband artifacts. The offending divers were arrested upon returning to their boat and will go to trial in a few months.

As reported in a previous review, diver Paul Ehorn has been charged with the theft of a dragon figurehead from the *James R. Bentley*, a schooner sunk in Michigan waters. To complicate matters, Ehorn has now been charged with stealing a porthole from the *Roscino*, a steel yacht sunk in 180 feet of water off Kenosha, WI. The vessel supposedly hit some unknown object on April 28, 1928, and plunged intact to the lake floor. It has been a popular dive for advanced sport divers for many years because of its excellent state of preservation. Ehorn was arrested after a night dive on the vessel when he was caught with a fresh, wet porthole hidden in his van. He has been involved in a series of run-ins with the authorities over shipwreck plundering incidents.

In another legal matter, the court battle over the shipwreck *Brother Jonathan* has finally been settled. As you may recall, the case reached the U. S. Supreme Court when California appealed the ruling of the Ninth District Court of Appeals which denied the State's jurisdiction over the wreck via the Abandoned Shipwreck Act. Rights to the wreck and its cargo had been claimed by Deep Sea Research, a salvage company. The Supreme Court

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had remanded the case back to the U. S. District Court to rule on the question of abandonment. Just before that hearing, the involved parties reached an agreement. Ownership of the vessel and those artifacts still on the sea floor will be retained by California, as will most of the objects salvaged during the past three years while legal proceedings were underway.

However, 1,007 of 1,207 recovered coins (\$20 goldpieces) have become the property of the salvage firm, which has subsequently auctioned them for about \$4.5 million. The other 200 coins retained by California will be used for educational and display purposes. Deep Sea Research will also continue salvage operations under permit from the State. Other claimants, such as the federal government, Wells Fargo and heirs of individuals lost in the sinking retain the right to prove and establish ownership of those materials raised in the future.

The *Lady Elgin* ownership contest has also been finalized after a 10-year court battle. The Illinois Supreme Court has awarded salvage rights to the historical Civil War vessel to commercial diver Harry Zych, who located its remains a decade ago. Illinois historians do not plan to take the case to the U. S. Supreme Court because the appeal decision was unanimous. The vessel broke up during the sinking, leaving an trail of parts and artifacts along a several miles of bottomland in 60 feet of water off Highland Park, IL.

As one recalls, the State of Illinois claimed the *Lady Elgin* under the Abandoned Shipwreck Act, but Zych was able to show that it was not truly abandoned and that ownership was

still retained by the company which originally insured the vessel and paid for the loss. Zych and his Lady Elgin Foundation purchased the ownership rights from the CIGNA Group, the direct successor of the original insurer. His plan calls for raising, preserving, and displaying the artifacts in a Lady Elgin Museum. One hopes that Zych is successful, but earlier attempts by private individuals to carry out similar preservation projects have not fared well.

Also settled for now is the legal debate over ownership of the *Captain Lawrence*, a schooner which sank in 1933 on the north end of Poverty Island in upper Green Bay. It will be remembered that, when lost, the *Captain Lawrence* was searching for the legendary Poverty Island treasure. Overtime, certain treasure hunters became convinced that the schooner's crew had actually found the lost fortune or clues to its whereabouts. A salvage firm, Fairport International, located and claimed the wreck, but ownership was contested by the State of Michigan in 1994. The U. S. Western District Court ruled that the wreck was abandoned and belonged to the State of Michigan, but Fairport appealed that decision. In May, the Appeals Court remanded the case back to the District Court for a final ruling on abandonment. This fall, the Court found for the State of Michigan, declaring that compelling evidence indicated that the vessel was indeed abandoned. Further appeals might occur.

To be continued in the next issue of Wisconsin's Underwater Heritage.

Correction

The Canoe pictured on the front page of the December 1999 issue of *Wisconsin's Underwater Heritage* was incorrectly identified as Wisconsin's oldest watercraft. The canoe pictured, which is also undergoing treatment at the State Historical Society conservation laboratory is about 150-200 years old. We apologize for the error.

Civil War Naval Reenactment

The Chicago Historical Society will present a symposium and reenactment titled *Brown and Blue Water Navies in the Civil War*.

Location:

Chicago Historical Society
1601 North Clark Street
Chicago, IL 60614

Date and Time:

Saturday, September 23, 2000

Other sponsors are:

National Archives and Records Administration – Great Lakes Region
Chicago Civil War Round Table
Salt Creek Civil War Round Table
Public History Program at Loyola University
National Park Service

Fee is \$35.

Boxed lunch is \$10 extra.

Contact Ms. Amy Woodward
312-642-4600



WUAA Mission

Ten years ago a group of divers began meeting to discuss the formation of a group to promote underwater archeology in Wisconsin. In 1987 the federal Abandoned Shipwreck Act was passed and in 1988 the Wisconsin state legislature provided initial funding for the State Historical Society to conduct a pilot study of state underwater archeological resources.

With this background, this group felt that an organization was needed to encourage individuals to support and to participate in the documentation and preservation of Wisconsin's underwater resources.

These meetings resulted in the formation of the *Wisconsin Underwater Archeological Association* in 1991. A statement of purpose was formed that specified six aims for the new association. These aims have served to guide the association, to help the officers and directors decide on appropriate projects, expenditures and other activities.

To provide access to information pertaining to underwater archeology statewide.

To provide training in and information related to performing underwater site surveys.

To promote research and education in underwater archeology in Wisconsin and the surrounding Great Lakes.

To distribute the results of research projects to members and to the general public.

To work in cooperation with responsible organizations interested in underwater archeological resources.

To promote the conservation and preservation of underwater archeological resources and sites.

Historic Preservation Listening Sessions

The Division of Historic Preservation of the State Historical Society needs your help in setting its priorities for the next five years. They will be conducting a series of listening sessions at locations throughout the state. Dates and times are listed below. Please attend if you can and give them your input, particularly in support of the underwater program.

For more information contact Marie North at 608-264-6498 or mhnorth@mail.shsw.wisc.edu

Madison

March 13, 2000
7:00 – 8:30 pm
State Historical Society Auditorium
816 State Street

Eau Claire

March 13, 2000
7:00 – 8:30 pm
Holiday Inn Convention Center
205 S. Barstow Street

Ashland

March 14, 2000
7:00 – 8:30 pm
Northern Great Lakes Visitors Center
Hwy.2, near intersection of Hwy. 2 and 13

Richland Center

March 14, 2000
7:00 – 8:30 pm
UW-Richland Center
Melville Hall – Pippin Conference Room
1200 Hwy. 14 West

Wausau

March 15, 2000
7:00 – 8:30 pm
Marathon County Public Library – 3rd floor meeting room
300 N. First Street

Appleton

March 16, 2000
7:00 – 8:30 pm
Appleton Public Library
225 N. Oneida Street

Milwaukee

March 16, 2000
7:00 – 8:30 pm
Milwaukee County Historical Society
910 N. Old World Third Street

It Grows in Trees

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rolled on and on till its faint blue billows broke against an incredibly distant horizon.

Excerpt from Conrad Richter's play *The Trees*.

At one time, a vast unbroken forest stretched across the northern United States and southern Canada from the eastern seaboard to the western edge of the Great Lakes and beyond. In the early eighteenth century, French explorer Baron de Lahontan wrote in his *Descriptions of the Trees and Fruits Northern Countries* that trees of the Great Lakes stood "very tall, straight and thick; and are made use of for Masts, which The King's Pinks do often times transport to France. 'Tis said, that some of these Trees are big enough, to serve for a mast to a First-rate Ship."

As North America grew rapidly throughout the nineteenth century, the timber industry emerged as a product of expansion. The upper lakes region sent enormous amounts of wood east to expanding urban centers. The western lakes region, experiencing impressive new growth, also demanded lumber. With a mushrooming population, the market hungered for wood products, and thousands of men working in the seemingly endless forests attempted to satisfy it. In the 1880's, Saginaw, Michigan shipped out over 900 million board feet of lumber a year, and a mill in Michigan's Upper Peninsula produced 200,000 feet of lumber and 300,000 shingles in a single day. With such incredible outputs, the industry moved westward into the untapped forests of Wisconsin and Minnesota. By the turn of the century, the stress of consumption continued to devour

the pinery. A single Wisconsin mill turned out an average of 75 million feet of lumber and 30 million shingles annually for 14 years.

Wisconsin is divided into two general floristic provinces: the southwest, or prairie-forest province, and the northwest, or northern hardwoods province. S.A. Wilde, a professor of soil science at the University of Wisconsin-Madison, wrote that "natural forces divided ... [Wisconsin] ... into ... the northern half [which] is covered by soils that have the world's highest productive potentials under forest cover. ... and the southern half [that] is comprised of soils that contribute their full to the breadbasket of America."

The north woods contain a wide variety of vegetation types, both forest and non-forest. These are the result of an impressive variation in topographic ranges, from the very wet to the very dry and from sandy and thin rocky soils to deep loams and clays. Conifers such as pine, spruce, hemlock, fir, cedar and tamaracks, and hardwoods like maple, birch, oak and ash thrive in Wisconsin woodlands.

Pinus Magnifica

Spectacular stands of hardwoods and conifers stood in the forests of northern Michigan, Minnesota and Wisconsin. Although these other trees proved useful later (mainly after the depletion of virgin pine), they did not drive the logging industry across the continent like pine did. *Pinus strobus* or white pine, dominated the lumber industry. According to the *Wisconsin Geological and Natural History Survey of 1898*, between 1840 and 1873, the lumber industry took 20 billion board feet of pine out of Wisconsin. Over the next 25 years, 66 billion board feet were cut. The woods became synonymous with the pine forests, the pinery, or the 'Empire in Pine'. S.A. Wilde expanded

in *Woodlands of Wisconsin*.

White pine is the central figure of American folklore that features logging days and lumber camps. ...

'Pinus magnifica' would be more appropriate name for this tree than its present scientific label. More than any other member of the eastern American forest, this tree conveys a feeling of respect tinged with awe.

White pine has several desirable features that made it king of the lumber industry. The first is its ability to grow in diverse environments. John T. Curtis, a former professor of botanical studies at the University of Wisconsin, wrote in *The Vegetation of Wisconsin* that pine "is the only species which is present in appreciable quantities in all segments of the full moisture gradient from wet bogs to xeric sand plains." Although the tree thrives in sandy soils, it can grow in just about any soil type, and can actually grow in the cracks of sandstone cliffs. Pine requires less moisture and food than most species in order to produce a given amount of wood, and therefore grows rapidly.

White pine can grow up to seven feet in diameter and over 200 feet in height, with the average maximum size around five feet in diameter and 125 feet tall. In the 1920s, a single 113-foot tree, with a 3-foot diameter produced about 1,700 board feet of lumber. When analyzing historic lumbering, it is important to understand yields are relative to age of the timber stand: modern white pine provides an average of 45 million board feet per acre at 80 years, while virgin forests' production is estimated around 140 million board feet per acre.

Many trades considered white pine an ideal building material. Pine's tendency to drop lower limbs as it grows (a typical stand will not spread branches until 50 feet or higher) results in a straight trunk with even-

grained wood clear of knots. George Hotchkiss, a nineteenth-century historian and editor of the *Lumberman's Directories*, wrote of the species favorable characteristics:

Being of a soft texture and easily worked, taking paint better than almost any other variety of wood, it has been found adaptable to all the uses demanded in the building art. ... No wood had found greater favor or entered more fully into supplying all those wants of man which could be found in the forests growths.

Although Native Americans and early Euro-Americans utilized the forest of the Great Lakes for centuries, sweeping exploitation of the resource did not begin until the early nineteenth century. Facing shortages of domestic timber, in part due to urban growth and military consumption during the Seven Years and Revolutionary wars, the British initially turned to the Baltic to help relieve the situation. In the early 1800s, Napoleon cut the British off from the Baltic timber trade in an effort damage Britain's naval and maritime dominance. European forests, logged for centuries and

poorly managed, had been exhausted of premium timber. The British Navy desperately needed to find a new source of lumber and turned to their North American colonies, the great Canadian forests along the shores of St. Lawrence River, Ottawa River and Lake Ontario.

The old growth, or virgin, forests of the New World produced a quality of wood not seen for centuries in Europe. Timber exporters flocked to Quebec and marked the beginning of the great timber and lumber trade of the Great Lakes. Although an 'endless' supply of the highest quality timber existed, it had to reach a mill to earn a profit. Pine's low density, unlike the hardwoods that co-existed with it, eased the burden of transporting such a bulky commodity through the wilderness - it floated. For those who worked in the frontier, the rivers, streams and lakes provided the only efficient means for transporting saw logs any distance in a landscape void of roads and rail lines.

The greatest expense in nineteenth century lumber industry resided in transportation costs. Shipping timber to mills, excluding

final shipment to market, accounted for anywhere from 52-75 percent of the total cost, even as late as 1913. "Regardless of time, place or type of operation," wrote William Rector in *Log Transportation in the Lake States*, "the transportation of logs was a major pivot around which the entire manufacturing process was forced to revolve." Mills employed railroads, streams and rivers to extend reach into forest interiors, in an effort to keep the saws running.

Some mills turned to the Great Lakes to overcome the limitations set by the natural meanders of area tributaries or the economics of laying track in the frontier. Giant log rafts, or booms, provided an economical means of transporting saw logs over great distances. The boom or bag, a series of short logs (around 16 feet) with large diameters (three to four feet) fastened together end to end, made up the perimeter and provided the raft's only structure. Filled with loose logs, these log rafts, reaching up to 25 acres in size, were towed by steamers to move tremendous amounts of timber. Over 25 million board feet moved across Lake Huron

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The Noquebay loaded with wood
photo courtesy
Milwaukee Public Library

It Grows in Trees

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from Canadian forests to Michigan mills in 1890, and four years later the number jumped to 300 million board feet. To the west, tugs towed colossal log rafts along the shores of Lake Michigan and Green Bay, supplying mills with legions of logs.

Ideal for the lumber industry, log rafts created chaos for the other waterway users. A United States House of Representatives report from the 51st Congress provides a "partial list of the casualties resulting from towing rafts during three months and a half of the year 1890." The lake figures calculate to \$62,850 worth of damage, an amount that steadily rose over the next decade. One contemporary called log rafts the "greatest man made obstacles to navigation that ever were seen on the lakes." Poorly lit and often invisible to other sailors, log rafts could entangle unsuspecting vessels in a tow-line or entrap them in a sea of logs pounding upon their hull. Congress also reported:

[Log rafts have caused] serious collisions, and the displacement of buoys and stakes, and other aids to navigation which are absolutely necessary to mark the channel. ... As the speed of the raft is much less than other boats, their passage through these narrow waters oftentimes not only cause damage by collision, but impedes navigation by preventing the passage of boats making a higher rate of speed.

A Felled Forest in the Prairie - Chicago

Winter months brought the legendary logging camps which dotted the pinery - big men, cutting bigger trees, producing even bigger tales. The spring thaw saw the river drives and lake rafting, which moved gargantu-

an amounts of wood to the mills. In some mills, machinery worked around the clock for months at a time, stopping only for repair: transforming logs to lumber-acres to board feet. In 1871, the mill at Little Sturgeon ran for three months without stopping for more than five minutes. As trees fell, lumber barons accumulated impressive wealth. Ironically, it was the great prairie, not the great pinery, that profited most from the lumber industry. Chicago, 'Nature's Metropolis', lacked significant local forests, yet it became the greatest lumber distributor in America, if not the world. Without local forests, Chicago's market relied upon the trees and mills of Michigan and Wisconsin.

The Great Lakes allowed Chicago to profit from resources it lacked. Lake Michigan provided the city with convenient access to an arboreal ecosystem and its resources. Schooners, steamers and barges brought the forest in droves to the prairie. Such a demand for lumber existed that a shortage of vessels to transport the commodity developed. The *Detroit Free Press* reported in 1864 that the "class of vessels most earnestly sought are those best adapted for the lumber trade. Nearly all of our spare vessels in this locality have been disposed of, and ... a dozen more would meet with ready sale."

The Chicago lumber yards held over 400 million board feet in 1879 and controlled an estimated \$80 million in capital, and its lumber district had twelve miles of dockage devoted to handling lumber. "One thing is for certain," wrote Chicago's *Sunday Inter Ocean*, in 1895, "those great lumber piles tower up to a height sufficient to excite the wonder and admiration of people not in the lumber business." Astronomical amounts of lumber moved through Chicago. At

times, the harbor received in excess of 200 vessels loaded with lumber in a single day. In 1872, over 9,000 of the 13,000 Chicago Harbor arrivals brought lumber to be stacked in the great yards.

In 1874, the *Wisconsin Lumberman* wrote of Chicago that "no lumber market but this could dispose of an average of three million feet a day." The scale and competition of Chicago lumber yards produced low prices, but virtually guaranteed that mill owners always found a willing buyer, and retail dealers a seller. The *Wisconsin Lumberman* later reported, "Chicago is not only the largest lumber market in the world, but it has always had an eminent reputation as a market upon which almost any amount of lumber could be placed at any time and sold for cash." Wholesalers purchased lumber by the shipload upon their arrival, an attractive draw to mill operators looking for quick turnaround times to maximize the number of shipments in a season. This enticed mill operators from ports around Lake Michigan, and even from as far as Lake Huron, to deal their goods there.

Reference:

Gray, J.J., *Fueling the Fire: Underwater Archeological Report on the Claffin Point Wreck*, State Historical Society of Wisconsin, Madison, 1998.

Ghost Ships Festival

A new annual conference for Great Lakes historians, researchers, divers and underwater archeologists will be held at the Milwaukee Public Library's Centennial Hall on Saturday, March 25th, 2000.

Called the Ghost Ships Festival, the event will feature films, seminars and presentations by divers, historians, archeologists, researchers and wreck-hunters from around the Great Lakes region.

Tickets for this event will be \$20 each and proceeds will be used to fund the preservation of Great Lakes wrecks. The Ghost Ships Festival is hosted by the Great Lakes Shipwreck Research Foundation, Inc., a non profit organization.

For more information, go to the Ghost Ships Festival website at: www.ghost-ships.org

Ticket information can be obtained by email at: tickets@ghost-ships.org

Research Award

The Association for Great Lakes Maritime History is sponsoring the *Henry N. Barkhausen Award for Original Research in Great Lakes Maritime History*.

To obtain information about the award or to submit an application contact Fred Neuschel at:

AGLMH, 77 Esther St.
Crystal Lake, IL 60014
fneuschel@earthlink.net

or go to the AGLMH web site at www.aglmh.org and click on 'News' then 'Barkhausen Award'.

Survey for the WUAA Members Interest Database

Would you like the opportunity to become more involved with the Association? Do you have any ideas or suggestions for the Association? Since we meet as a group only twice year, we would like to hear from our members through a survey. This survey includes some general topics of interest with respect to the fields of Maritime History and Underwater Archeology. The collected information will then be used to update our Members Interest Database. Let us know what topics you are interested in, have experience in, or would like to gain experience in. If the categories below do not apply to you, please feel free to send us other suggestions. While this is a voluntary survey, it is important and the information will assist us in the planning and direction of the Association.

The Members Interest Database is comprised of five main categories:

Field Work

Underwater mapping
Underwater photography, video
Dive Support
Boat Support
Surveying - remote sensing,
magnetometer, sidescan sonar

Archival/Library Research

Microfilm, microfiche, card catalogue, internet, books, journals

Association Committees and Activities

Newsletter
Publications
WebPages and Email
Projects
Membership

Training

Training in Archeological methods

Training in ship construction

Public Talks / Lectures

Topics would be on Underwater Archeology or Maritime History

In addition to the above survey we would like to hear of any personal Maritime History and Archeological projects. Finally we would like your thoughts on both the Newsletter and the Web site. What do you like or what would you like to see?

Mail your replies to:

WUAA
P.O. Box 6081
Madison, WI 53716

Or email replies or questions to:
Russell Leitz at rleitz@vbe.com