

### Coming Events

April 27, 2001 **Our World Underwater Underwater Archeology Workshop**, in Chicago. Contact Jeff Gray, 608-271-1382.

May 12, 2001 **Wisconsin Underwater Archeology Association Spring Meeting and Yahara River Canoe Trip**, in Madison. Contact Cathy Klecker, 608-655-3769.

**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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March 2001

## Past, Present and Future: The Wreck of the Schooner *Fleetwing*

by Russell Green

**B**etween 1986 and 1987, David Cooper led several efforts to document the wreck of the *Fleetwing* and research the vessel's history. Much of the history and wreck description in this article is taken from Cooper's published field report. Information has also been drawn from the *Fleetwing*'s pending National Register Nomination and from material destined for a new *Fleetwing* section on the Wisconsin State Historical Society's website: [www.seagrant.wisc.edu/shipwrecks](http://www.seagrant.wisc.edu/shipwrecks).

### The Past

During the mid-19th century, the success of the lumber and grain industries ushered in an era of expanding prosperity in Wisconsin. Due to the size and weight of the cargo, transporting timber and grain over land was a difficult, unreliable and relatively expensive process. Consequently, shipping these commodities on the decks and in the

holds of watercraft emerged as a sound, and profitable, alternative to land transportation.

Used for rapid, short voyages with a quick cargo turnover, schooners employed a smaller crew, possessed a shallower draft and could sail more closely to the wind than a square rigged vessel. The economic viability, indeed necessity, for such a vessel on the Great Lakes ensured that profit-minded ship owners would continue to demand such a vessel until the turn of the 20th century. The Great Lakes schooner remains a well-recognized symbol of early commercial shipping on the inland seas.

Built in 1867 in Manitowoc, Wisconsin by Henry Burger, the *Fleetwing* embodied the shipwright's desire for speed and durability. The three-masted vessel was characteristic of schooners constructed in the Great Lakes shipping frenzy that erupted after the Civil War. The *Fleetwing* and other well-built Manitowoc vessels helped the Clipper City perpetuate its reputation as a premier Great Lakes shipbuilding port, specializing in fast and sturdy vessels for grain, lumber and general merchandise. The success of these vessels also helped establish Burger's fledgling company, which still builds boats in Manitowoc today.



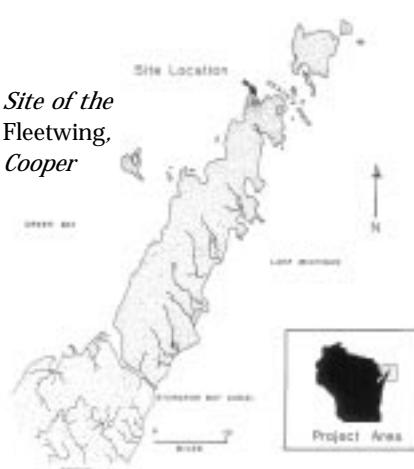
*Vessel believed to be the Fleetwing, SHSW*

The \$30,000 *Fleetwing* was 132 feet long at the keel and had a 28-foot beam and an 11-foot 6-inch depth of hold. The schooner was launched on Aug. 10, 1867 amidst an expectant and jubilant crowd. Impressed by the new vessel's blend of solid construction and clean lines, a *Manitowoc Tribune* reporter wrote:

"...there is no stronger vessel than this. Nothing that would add to its strength has been omitted, and it is fully expected she will rank as A No. 1 [insurance rating] for seven years. She is certainly a massive craft, yet from what is said of her and from our knowledge of lake vessels we would infer there is no spare timber used."

Indeed, the *Fleetwing* did maintain an A1 insurance rating for seven years. The dependable schooner spent 21 years on the lakes, mostly as a grain clipper, carrying 18,000 bushels of wheat or corn down bound from Chicago to Buffalo and coal or manufactured goods on the up bound voyage. These highly competitive trips usually took two weeks or more.

In 1880, the *Fleetwing* began carrying lumber for Chicago's largest lumber yard, the John Spry Lumber Company, ending her glory days racing other grain clippers for the Straits of Mackinaw. With a capacity of



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## Wisconsin Underwater Archeology Association Spring Meeting and Canoe Trip

The Spring meeting of the Association will be held near Madison on Saturday, May 12, 2001. We will meet at the boat launch at Babcock County Park on Lake Waubesa, in McFarland at 10:00 am. McFarland is just south of Madison. Take highway 51 south from highway 12-18 (the beltline) about 2.5 miles. Go straight at the stop light. Babcock Park is two blocks further on the west side of the road.

We will canoe down the Yahara River guided by Wisconsin State Archeologist Bob Birmingham. Along the way we will stop at several sites of historic and prehistoric interest. The trip will end at Fish Camp County Park, on Lake Kegonsa where we will have lunch. As of this writing lunch plans have not been finalized. The business meeting will take place at the park after lunch.

We will help arrange canoe rentals for those who do not have their own.

Estimated cost is \$30 per canoe or \$15 per person. Please wear appropriate clothing and footwear, some landing sites may be muddy.

We would like to know in advance how many people will be participating. Please contact Cathy Klecker at 608-655-3769 or [cjklecker@juno.com](mailto:cjklecker@juno.com) if you plan to attend, if you need a canoe for details on the lunch once they are finalized or for any further information.



*The Straits of Mackinac, Green*

**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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## Association Notes

### Spring Lecture

#### *The CSS Hunley*

The presentations on excavating the Civil War submarine H.L. Hunley were very well attended, with a crowd of 160 in Madison, 120 in Manitowoc and 60 during a snowstorm in Superior. South Carolina Underwater Archeologist Chris Amer discussed the history of the development of the Hunley and its relation to other events of the Civil War. He then described the discovery, excavation and recovery of the vessel.

Preservation progress can be tracked at the web site:  
[www.hunley.org](http://www.hunley.org)

WUAA would like to thank Andy Jalbert and Stratamo for providing refreshments at the Madison lecture.

### WUAA Workshop

#### **The Marine Steam Engine**

The workshop held in Manitowoc on March 10, 2001 was a great success. Dr. Bradley Rogers of East Carolina University explained the development of the steam engine from single-



*Workshop participants out on deck, Green*

cylinder, low pressure, condensing engines, to high pressure, compound engines. He also covered the transformation from paddlewheel to propeller propulsion systems, improvements in boiler technology and the changes in ship design that accompanied these engine developments.

In the afternoon attendees traveled to Kewaunee and toured the vessel



*Top of the Engine, Green*

*Straits of Mackinac.* The Neptune Nimrods Dive Club of Green Bay is planning to clean up the ship and sink it in Lake Michigan for a dive site. Members were able to go through the entire ship, with the engine room the focus of the tour.

### Donation

WUAA would like to thank Bob and Nancy Korth for their generous donation of funds to the Association.

### Web Site

The Association is in need of a manager for our web site. Any member interested in helping out can contact Danny Aerts at 608-821-0048 or [djaerts@facstaff.wisc.edu](mailto:djaerts@facstaff.wisc.edu).

### Ford Seahorses

The Ford Seahorses Great Lakes Shipwreck Festival was cancelled this year due to an increase in fees for using the auditorium at the Ford Headquarters. The club has secured a new, larger site for the 2002 festival.

# Shipwreck Diving and United States Law

by Andrew Jalbert

**A**s Wisconsin divers, we probably all field the same question whenever we are in the Caribbean: "what is there to see underwater up there?" The answer is of course an easy one:

Shipwrecks....lots of beautifully preserved shipwrecks. In fact, the Great Lakes, with their rich maritime history and ideal conditions for preservation, are home to thousands of wrecks. This reply usually sparks plenty of interest and more times than not, leads to a discussion about sunken ships.

The public's fascination with shipwrecks has grown considerably in recent years, due in part to blockbuster movies such as *Titanic* and popular documentaries about new underwater discoveries. Shipwrecks have developed an air of romance, adventure and mystique, and divers flock to them in great number. As exciting as shipwreck diving is, it's important to remember that laws designed specifically for their protection are in place and enforced in many areas. Those who break these laws, even unknowingly, can face prosecution. Because of this, shipwreck divers should familiarize themselves with a few laws, both on the federal and the state level.

One of the first things that must be taken into account is that most wrecks resting in U.S. waters belong to someone, whether it's the state government, the federal government, or a private company. The following three sets of ownership guidelines cover most of the U.S. wrecks that today's recreational divers can visit.

## Shipwreck Ownership

**The Abandoned Shipwreck Act**  
(U.S.C. 43 Sec. 2101)

Passed in 1987, the Abandoned Shipwreck Act transferred ownership of and responsibility for shipwrecks, from the Federal Government to the individual states. This includes wrecks located in any U.S. state, the District of Columbia, Puerto Rico, Guam, the Virgin Islands, American Samoa and the Northern Mariana Islands. Shipwrecks are defined as the vessel itself as well as any cargo or other contents. Abandonment is defined as that "to which title voluntarily has been given up by the owner with the intent of never claiming a right or interest in the future and without vesting ownership in any other person." (NPS 1990b:50120) If the shipwreck lies beneath "navigable state waters" and has been abandoned, the wreck belongs to the state in which it is located.

## Sunken Naval Vessels and Aircraft (Admiralty Law and Articles 95 & 96, Law of the Sea Convention)

One group of vessels not covered by the Abandoned Shipwreck Act is Navy ships. Any sunken Navy ship or aircraft is not the property of the state, but rather of the United States Department of the Navy. The Law of the Sea convention established that "right, title or ownership of federal property is not lost to the government due to the passage of time". This includes vessels lost in U.S., foreign or international waters. Unless specific action is taken (such as the sale of a vessel) these wrecks belong to the federal government.

## Wrecks Located Within Federal Parks Land Boundaries

Another exception to the Abandoned Shipwreck act can sometimes be found in National Parks or Indian tribal lands. Certain parklands

and National Shorelines have regulated diving on specific shipwrecks within their boundaries. This information is very easy to access if you plan to dive on a shipwreck site in a National Park or Shoreline. Park officials can inform you on any restrictions or permitting that is required.

## Shipwreck Diving Guidelines

So most U.S. shipwrecks belong to someone. Does that mean that it's illegal to dive on them? No. Although the Abandoned Shipwreck Act turns ownership over to the states, it also requires that "reasonable access" to these wrecks be allowed. "Reasonable access" is defined as "guaranteed recreational exploration of shipwreck sites." Most Navy ships may also be visited at the diver's own risk. Again, diving wrecks (including U.S. Navy Wrecks) that lie within National Park, shoreline or sanctuary boundaries may require a permit. Although it is legal to visit these sites, there are federal and state guidelines that must be followed.

## National Historic Preservation Act (16 U.S.C. 470)

Passed in 1966, the National Historic Preservation Act serves many purposes, including the "identification, evaluation, recordation, documentation, curation, acquisition and protection..." of federal historic properties (NHPA Sec. 301 [8]). All federal agencies, including the U.S. Navy are responsible for the protection of their historic properties including ship and aircraft wrecks. While divers may dive on these wrecks, federal property laws prohibit the removal or disturbance of anything on the wreck. Divers who have collected from or damaged U.S. Navy shipwrecks have been successfully prosecuted.

## State Laws

As mentioned earlier, most U.S. wrecks visited by recreational divers are the property of the state as a result of the Abandoned Shipwreck Act. State law and enforcement policies vary however from state to state. Generally speaking though, most states have historic preservation and/or archeology laws in place, which prohibit the removal of artifacts or damaging the ship itself. Wisconsin statutes for example state that "Whoever intentionally defaces, injures, destroys, displaces or removes

any archeological object or data belonging to the state...shall forfeit not less than \$1,000 and no more than \$5,000" (44.47 [7]) Similar historic preservation laws exist in most states, including several coastal regions. The state also has the discretion to allow and regulate any salvage operation.

These laws are in place to protect the integrity of shipwrecks, not to restrict divers from visiting them. There are only a few special circumstances (wrecks in some federal park

lands or certain military ships) where a permit is required to dive a U.S. wreck, and these are generally quite easy to obtain. The real restrictions are placed on the removal of artifacts from ships (both military and non-military) or damaging the vessel. By exploring these sites responsibly, divers will not only avoid potential fines, but will help preserve them for others. Shipwrecks and their cargo are non-renewable resources and once they are damaged or gone, they cannot be replaced.

## Stories From The Archives

*The following stories were uncovered by Russel Leitz during his archival research.*

### Submarine Diver's Outfit

*Door County Advocate, January 2, 1897*

The dress of a fully equipped diver on the present day weighs 168 pounds and costs about \$500. First of all comes 8 pounds of under clothing; then follows the dress itself weighing 14 pounds; boots 31 pounds, monstrous things with leaded soles; breast and back weights, 80 pounds; and lastly the helmet which weighs 35 pounds.

When the hull of the *Great Eastern* was cleaned by divers as she was being loaded with the cable for the Indian submarine telegraph, the contract price of the work was \$9000 and it was completed in six weeks by twelve divers. The encrustation on the bottom was more than a foot thick and after it was removed she lifted fully two inches.

The greatest depth at which a diver can safely work is thought to be 150 feet. There have been, however rare instances of diving to 200 feet and sustaining a pressure of 88 pounds on every square inch of the body of the diver. Diving was first invented by the action of the elephant in crossing a deep river, when he swims beneath the water, elevating his trunk, by which he breathes. The flagships in the British navy carry eight divers and the cruisers four each, fully equipped.

### Algoma

*Door County Advocate, June 27, 1896*

The people of Ahnapee have never been fully satisfied with the name by which that municipality is and has been known ever since it was organized, and a petition is now being circulated among the residents of the town to have it changed to Algoma. This move, it is said, will prove successful, and Algoma will henceforth be the correct thing.

It seems as though something more euphonious and pleasant than Sturgeon Bay might be substituted for this city. What say ye, friends?

### Twenty Years Ago - 1914 - Old Anchor

*Door County Advocate, January 26, 1934*

Three fishermen by the name of Jewson, Denslow and Moore recently found an old wooden anchor in Lake Winnebago which no doubt dates back many years and was made before the present cast anchors were used on the Great Lakes. The sweep of the hooked part of the anchor is six feet long and was cut from a large hardwood log. A stone weighing about 600 pounds rested in the crotch and the men raised it to the surface of the lake with great difficulty.

## The Wreck of the Schooner *Fleetwing*

*continued from page 1*

225,000 feet of lumber, she now ran to Chicago from Michigan's Lower Peninsula mills on Lake Huron. Notably, the vessel often returned empty, probably due to the time required or difficulty of locating cargo for the return trip. While business appeared to be brisk, profits were not. In January 1884, owner Andrew McGraw mortgaged the entire vessel, including her rig, anchors, boats, etc., to James McGraw for \$4,000 at 7 percent interest for one year. At the time the vessel was valued at \$5,000 and carried an insurance rating of B2.

At dusk, on Sept. 26, 1888, the *Fleetwing* left Menominee with a load of lumber bound for Chicago. The wind was fresh from the west, building to a northwest gale. Heading up Green Bay, the schooner approached Death's Door Passage. Located between the Door County mainland and Washington Island, Death's Door claimed many vessels each year due to scattered shoals, islands, shifting winds and contrary currents. A lightkeeper's diary reveals that approximately two wrecks a week took place there between 1872 and 1899.

As Door Peninsula's looming bluffs came into view, the schooner prepared to change course, enter the passage, and proceed toward Lake Michigan. In the darkness, however, Captain McGraw mistook Death's Door Bluff for the smaller Table Bluff, the last headland before entering the Death's Door Passage. Lights at the settlement of Garrett Bay were mistaken for lights in the passage. Believing he was further north and entering the passage, Captain McGraw sailed instead

into Garret Bay. At 11:00 p.m. the *Fleetwing* struck the rocky beach of the bay with a grinding crash that apparently sheared off a mast.

There are conflicting accounts of the vessel's demise. Newspapers indicate that the error was not noticed until the schooner hit the beach, while a secondary source claims that frantic last-minute efforts were made to alter her course after the error was realized. Nevertheless, the *Fleetwing*'s service on the Great Lakes had ended. The crew swam, waded, or rowed ashore uninjured, and ultimately found themselves at the nearby home of Andrew and Mary Nelson.

Due to gale-force winds at the time of the wreck, nothing could be done that evening. The following day, the *Fleetwing* was found badly damaged. Her stern had settled, and she had 9 feet of water in her hold. Wrecking tugs were called, but it took four days for an expedition to Garrett Bay to be assembled.

Over the ensuing days, the wind pushed the schooner broadside onto the beach, though it was hoped that

with more favorable wind she could be repaired, pumped out and pulled off with a tug. It was not to be. A second gale sprang up shortly after the pumps had been installed and the hired tug fled ten miles south to Eagle Harbor. The gale's fury fell upon the *Fleetwing*, breaking her in two and



Centerboard trunk, SHSW

grinding out her bottom on the rocks. When the tug returned, the schooner had been broken to pieces and was a total loss. The vessel was subsequently stripped and her surviving cargo returned to Menominee.

Due to the circumstances in which she was lost, few artifacts were left to the archeological record. After the vessel ran aground, the crew had time to hastily collect their belongings. Any valuable equipment was sold to the captain of the schooner *Conquest*. To the delight of local children, the vessel's deckhouse eventually washed ashore, providing an exciting, ready-made playhouse.

Scuba divers found the *Fleetwing* in the mid-1950's. Divers removed the schooner's anchors around 1956. Ceramics, clay pipes, a lantern and other small artifacts were also taken from the site shortly after its discovery. A peavy hook and grating in the Gills Rock location of the Door County Maritime Museum are attributed to the *Fleetwing*. The windlass and many barrel staves, reputedly from the *Fleetwing*, were taken to the On the Rocks Diver's Lodge in Gills Rock. During the 1960's, a furniture company is believed to have hauled away two flatbed truckloads of wooden timbers from the site.

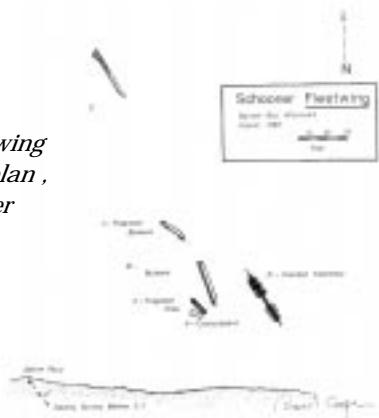
### The Present

The wreck lies directly off the public boat landing at Garrett Bay in Hedgehog Harbor. The site is accessible via shore entry and several large pieces of the wreck rest approximately 100-500 feet from shore. The site covers an area approximately 80 by 270 feet, and is situated on a sloping



Diver on the keelson, SHSW

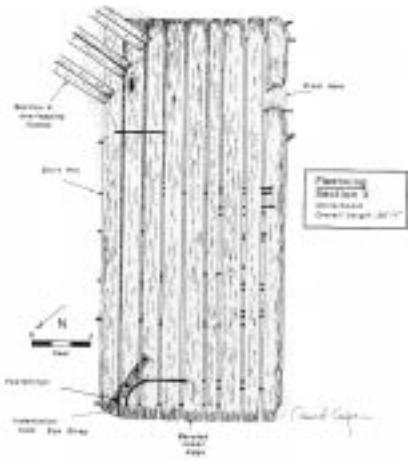
Fleetwing  
site plan,  
Cooper



bottom of stone, sand and clay in 10-25 feet of water. Surface water temperatures average 32°F in the winter and can reach 70°F in the summer.

The *Fleetwing* is broken up into four main sections: the centerboard; two hull sections; the keelson and bilges; the starboard side and bow.

The centerboard is a slab of joined planks approximately 20 by 8.5 feet. It can be identified by its pivot hole, slightly beveled lower edge, and fastening holes for a lifting ring strap. Slightly overlapping the centerboard is a 33-foot segment of the hull with two logs nailed to the underside. These appear to be part of a hasty patch nailed over a puncture from the grounding. This portion of the site is 15 feet deep, immediately north of the first drop-off shelf, and is the closest section to the public boat landing. The bottom is somewhat silty, with sand and scattered rock.



Centerboard, Cooper

The two remnants of the upper hull include bulwark stanchions topped with railcaps, deck clamps, lead-lined scuppers for draining water off the deck and chain plates that held the deadeyes for a mast back-stay or shroud. These two sections lie near each other in approximately 18 feet of water and are similar in appearance. The northernmost portion rests on a rocky bottom and is partially covered by sand. The other segment rests on a sandy bottom.

The largest portion of the site consists of the vessel's unusually heavy keelson assembly and bilges. The vessel possessed exceptional longitudinal strength due to a pyramid of 8 keelsons. These prevented the schooner's hull from hogging and sagging. This portion of the site also includes the keel, floors, centerboard trunk and mast steps. It is closest to shore, in 11 to 13 feet of water, and located on a sloping rocky bottom.

All three mast steps and the centerboard trunk are clearly visible. The centerboard trunk is particularly noteworthy, for although a common feature on Great Lakes schooners, little historical or archeological evidence of their construction exists. Some debris has gathered along the northeast side of this section, which seems to be the most exposed to wave action. The southwest side is better protected and better preserved.

The vessel's starboard side and bow is the largest of the outlying pieces and is the farthest from shore, lying in 25 feet of water, on a rocky bottom mixed with patches of clay. This section is 94 feet 3 inches long. It was probably dragged from the main portion of the wreckage by a retreating ice pack. Notable features are a hanging knee (the only extant piece of compass timber found on the site), deck clamps and a hand wrought chainplate of iron or steel.

## The Future

The *Fleetwing* is currently being nominated to the National Register of Historic Places.



Frames, SHSW

Additionally, the vessel will be added to the Wisconsin State Historical Society's Great Lakes Shipwrecks website. The website features eleven shipwrecks in Lakes Superior and Michigan, and includes historic photographs, underwater images and video. Dive guides for the *Fleetwing*, as well as thirteen other Wisconsin shipwrecks, are also available from the Society.

The wreck site provides an excellent opportunity for those who wish to learn more about ship construction first hand. The *Fleetwing* is often used by local dive clubs as a training site. East Carolina University's Program in Maritime Studies uses the wreck as an underwater classroom during their annual archeological field school, and this fall a troop of Madison Boy Scouts will dive the *Fleetwing* and earn credit toward their archeology merit badge. Although the site is subject to a slow but continual process of human and natural attrition, every effort should be made to preserve the site for future generations of recreational divers, underwater archeologists and historians. Offering a rare glimpse into Great Lakes schooner design and construction, the *Fleetwing* site is clearly a cultural resource worth protecting.

## Reference

Cooper, David J., 1986-1987  
*Archeological Survey of the Schooner Fleetwing Site*, 47 DR168, Garrett Bay, Wisconsin. East Carolina University Research Report No. 6, Greenville, North Carolina, 1988.