

# Concrete Boats

By Bill Hamelink

Some years ago - in my bicycling days - one of my exercise routes took me past a house in Shakopee where two young men were building a boat in the front yard. It was enclosed in plastic sheeting to afford a workable environment, day and night and winter and summer. I got up the nerve to stop and inquire and found a very large and strange catamaran hull being outfitted. This hull was concrete! Their plan was to make this livable sailboat, move it to Florida, and offer recreational trips on it. I don't know if they accomplished their dream, but the boat was gone in a few months. A concrete sailboat is shown to the right.



A modern day concrete boat

Their choice of concrete seemed quite novel. Now I am not one of these "How can it float?" people: after all we agree that even steel ships will float. Concrete fits nicely into a list of specific weights of common boat building materials: wood at 0.6, common concrete at 2.3, aluminum at 2.7, iron at 7.7, and water at 1.0. Any material will float given enough displacement. The strengths per weight are another story however. Concrete boats do suffer from higher weight per net load and sluggishness. The concrete is, of course, reinforced.

I remembered that concrete boats were made during WWII, due to the short- (continued on page 4)

### SCHEDULE OF EVENTS:

March 20, Tuesday	7:00 p.m.-9:00 p.m.	Membership Meeting
April 17, Tuesday	7:00 p.m.- 9:00 p.m.	Membership Meeting
April 21, Saturday	To Be Determined.	3 Pond Race

## COMMODORE'S CORNER



By Wayne Snyder

This is being written on the 29th of Feb. and in my quest to be first on the pond I pondered going

there to see if there was enough water on top of the ice because of the rain to float a boat. But I didn't! The EMYC has been invited to do a show and tell at a Sea Scout meeting Monday the 5th, several of us are going. A full report will be in the April newsletter. Thanks Tom for giving me the business card to follow up on as this fits perfectly with my desire to bring R/C boating to young people through the club.

I appreciated all of the show and tell at the last meeting as well as Paul's telling us about his boat. All of this is inspiring and makes me want to get busy on the boats that are languishing in my shop!

Fred has agreed to run the 3 pond race this year again, let's support this fun time with lots of boats. Thanks Fred. Tony Johnson will be our speaker this month. I am looking for a program for April and subsequent months so please contact me.

I thought the after meeting gab time was great last month with several boats and Dan Lewandowski's electronics installation as well, there was lots of things to see and talk about.

His use of servos and push button switches to activate several actions instead of using electronic switches for a cost effective way of doing the installation was insightful and well worth considering when doing a complicated installation on a model. -Wayne



Paul Olsen answered boat building questions about his 1900's schooner at our February meeting.

**Special Thanks...**To members that contributed to this Sail & Scale issue: Bill Hamelink, Paul Olsen, David Robb, Jim Smith, Dale Johnson & Wayne Snyder. Your efforts are appreciated!

## JOHN BERTELSEN OUR NEWEST MEMBER



Please welcome our newest member John Bertelsen. He became interested in our club at the 2011 Lighthouse Night after trying out Todd Moen's 914 sailboat. John is soon to be retiring, as he is winding down his career as a Civil Engineer. He plans on building a sailboat from a kit this Spring. -Todd Moen



## NAUTICAL KNOW-IT-ALL - BOATS IN LITERATURE

By Dewey Dessimow

**T**est your nautical book knowlege: Match the boat or ship names to the appropriate books that are listed below.

- |  |  |
|--|--|
| <ol style="list-style-type: none"> <li>1. Captain Hook's ship in the novel "Peter Pan"</li> <li>2. Captain Ahab's Ship in the novel "Moby Dick".</li> <li>3. The ship that rescues Ishmael in the novel "Moby Dick".</li> <li>4. Jason searched for the Golden Fleece in this ship.</li> <li>5. Captain Nemo's sub in "Twenty Thousand Leagues under the Sea"</li> <li>6. Submarine from "Ice Station Zebra".</li> <li>7. The boat name in Robert Lewis Stevenson's "Treasure Island".</li> <li>8. The name of the boat in Nicholas Monsarrats "The Cruel Sea".</li> <li>9. The boat name in H.G. Wells novel "The War of the Worlds".</li> <li>10. The boat name in Herman Melville's book "Billy Budd".</li> <li>11. The name of the boat in Rudyard Kipling's "Captains Corageous".</li> <li>12. The boat name in the "Narnia" books by C.S. Lewis.</li> <li>13. Dougal Robertson's boat in "Survive the Savage Sea".</li> <li>14. The name of Tristan Jones' boat during his "Incredible Voyage".</li> <li>15. The boat in "Two Years Before the Mast".</li> <li>16. Tania Aebi's took a "Maiden Voyage" around the world in this sloop</li> <li>17. Robin Graham sailed alone around the world in this boat.</li> <li>18. Thor Heyerdahl's raft for his 1947 expedition and his book's title.</li> <li>19. Captain Slocum sailed "Around the World Alone" in this sloop.</li> </ol> | <ol style="list-style-type: none"> <li>A. "USS Tigerfish"</li> <li>B. "Nautilus"</li> <li>C. "HMS Saltash"</li> <li>D. "S.Y. Lucette"</li> <li>E. The "Pequod"</li> <li>F. "We're Here"</li> <li>G. "HMS Thunder Child"</li> <li>H. "The Spray"</li> <li>J. "Dawn Treader"</li> <li>K. The "Viceroy"</li> <li>L. "HMS Bellipotent"</li> <li>M. The brig "Pilgrim"</li> <li>N. The "Rachel"</li> <li>O. "Jolly Roger"</li> <li>P. 24' sloop "Dove"</li> <li>Q. Sailboat "Sea Dart"</li> <li>R. The "Kon-Tiki"</li> <li>S. 26' sloop, "Varuna"</li> <li>T. The "Argo"</li> </ol> |
|--|--|

**2012 MODEL SHIPS & BOATS CONTEST & DISPLAY MAY 18-20**

Enjoy the longest running ships and boats model contest in the nation at the Wisconsin Maritime Museum in Manitowoc, Wisconsin. You can download the registration form and contest information at <http://www.wisconsinmaritime.org/special-events> Todd Moen will have a few printed copies of the form at the March meeting for those of you without access to a computer. Contact Wendy Lutzke at [REDACTED] [REDACTED] for more info. -Submitted by Jim Smith

Last month's Know-It-All question was correctly answered by Tim Smalley. The guitar boat is owned by Josh Pyke, an Austrailian songwriter & performer. You can watch a You-Tube video at [www.youtube.com/watch?v=rwRqD4Kmiy4](http://www.youtube.com/watch?v=rwRqD4Kmiy4)



## Concrete Boats (CONT.)

ages of steel, and I thought this was a rather novel and new idea. Wrong!

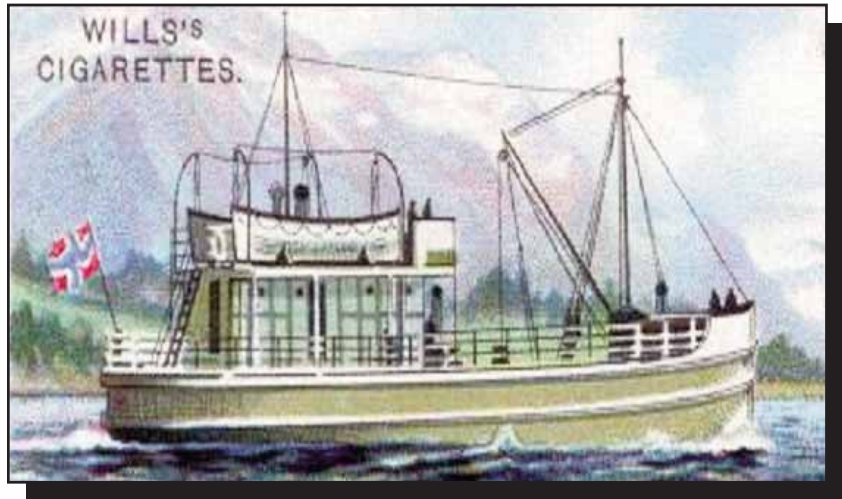
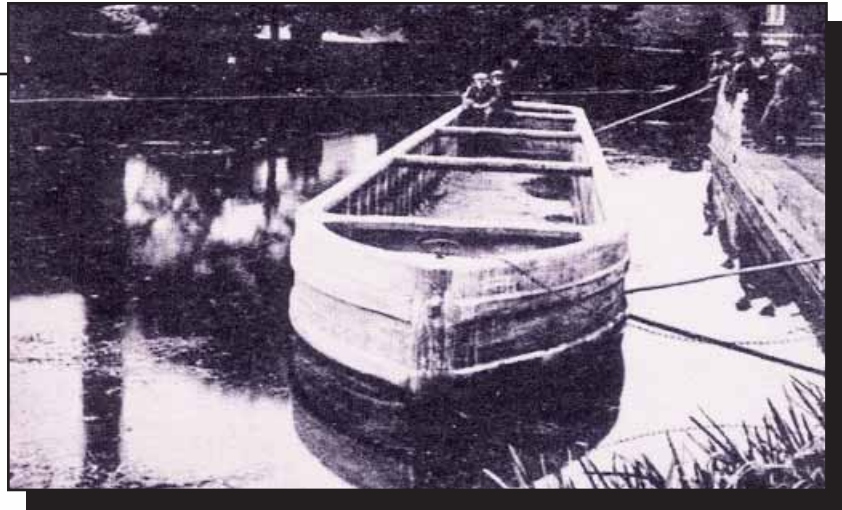
A small 1884 concrete boat was made by a Frenchman named Lambot and shown at the 1885 Paris Worlds Fair. This is reputed to be the first ferro-concrete ship to be built. There is an 1855 French patent for a 'Ferciment' boat; a ferro-cement structure. The concrete boat interest was now growing rapidly.

This first dingy was followed in the 1860's by a number of concrete barges that were built for use on the European canals.

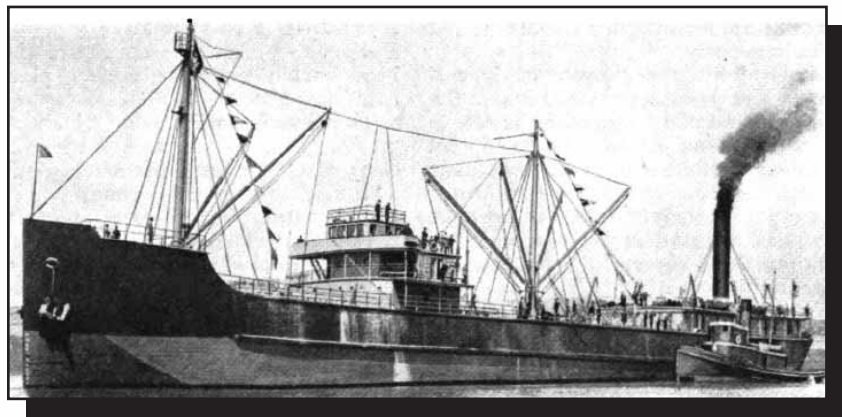
Shown in the top right photo is a typical canal barge. It is called a 'monkey barge' as differentiated from a barge with a superstructure and possible living accommodations. This barge is 70' long, 6' 11" beam, and will carry a 27 ton load.

A number of larger ships followed in the 1890's and ocean going vessels came in the 1910's. One of these was the 1917 Norwegian 80' *Namsenfjord* pictured at right. Another 1917 concrete boat from U.K. named the *Violette* is still afloat in England, though it is now used as a clubhouse.

WWI created a surge in the concrete boat business. There was a huge need for boats to get supplies to Europe and to supply England for their ship losses. Couple this with a critical shortage of steel and the concrete ship was a salvation, or at least a big help. U.S. shipyards were established to research and build concrete ships; the first being the *S.S. Faith* was launched in 1918. This ship was 320' long, 44.5' beam, 27.7' depth and had a displacement of 6175 tons. The thickness of the sides were 4" and the bottom was 4.5".



The Norwegian boat "Namsenfjord"



The "S.S. Faith" in 1918

## Concrete Boats (CONT.)



President Wilson set up the Emergency Fleet program and scheduled a build of 24 concrete ships; At the end of the war 12 were under construction and none had been delivered. Most have been sunk or scrapped. These 12 were finished and sold to the public.

England also had a concrete boat program during the war. They concentrated on barges and tugs. Like the U.S. the war ended before these vessels were completed. The remnants of one of the tugs is shown beached in the top left photo.

There was very little concrete ship activity between the two WW's. Compared to steel the concrete ships were more expensive to make and more expensive to operate.

WWII once again brought a surge of activity due to the usual reasons. In 1942 U.S. government issued an order to McClosky & Company of Philadelphia for 24 self propelled concrete ships. These were built in Tampa, Florida. They also ordered 42 unpowered barges from two California companies.

All of the McClosky ships were basically the same but outfitted as required. The left center photo is the **S.S. Arthur Talbot** and below that is the **S.S. John Smeaton**; seen in their prime.

At left, is a current picture of the **S.S. Thaddeus Merriman** in use as a breakwater on the Powell River in British Columbia, Canada. The disposition of these boats is:

- 2 sunk as blockships in the Normandy invasion
- 9 sunk as breakwaters in Virginia
- 2 are wharves in Oregon
- 7 are in the floating breakwater on the Powell River in Canada.



The "S.S. Arthur Talbot"



The "S.S. John Smeaton"



The "S.S. Thaddeus Merriman"

## Concrete Boats (CONT.)

These McClosky ships all speeded out as follows:

Length = 366 feet    Beam = 54 feet  
 HP = 1300 Gross Tons = 774 tons  
 Speed = 7 knots

As you might expect, concrete boats are still being made, but not as the large ships of the war eras. The catamaran I saw being made would seem to fit right into today's fleets like the concrete boats do in the two photos below.

---Bill Hamelink



Concrete boats that are currently used.

**Editors note: Captain Dave Robb expressed interest in this article and wrote:**

Concrete boats are interesting. They used them as floating docks in the Normandy Invasion in WW2. They were called Mulberries and served as an easy, fast and capable solution to an immediate problem. None were expected to return and none did. In modern terms, there was a fad in the 70s where it was advertised that you could build a big yacht cheap by building it out of Ferro Cement.

It is an Italian invention of Ferdinand Ferrie that has cement mixed with micro balloons. All you had to do was create a steel wire hull frame out of cheap mild steel which he figured any idiot could do better than building in a more noble material and plaster it.

The savings was there and the hull was only about 15% heavier than a fiberglass boat which is a little heavier than the equivalent in steel. It actually all works as advertised except that savings aren't that great.

You see, the cost of a full size boat hull is only 20% of the cost of the overall boat. To that you have to add an engine, electrics, plumbing, tanks, ports, decks, interior decoration and finishing, deck gear, sails, etc.

Oh, and one other small problem: concrete is 10% porous even with a glossy glaze. In salt water, it attacks the steel rod and creates an electrolyte and in about 10-15 years, there is no wire reinforcement left and the hull cracks and falls to the bottom of the ocean. This is very unsettling to the Captain when you are hundreds of miles from shore. -David Robb

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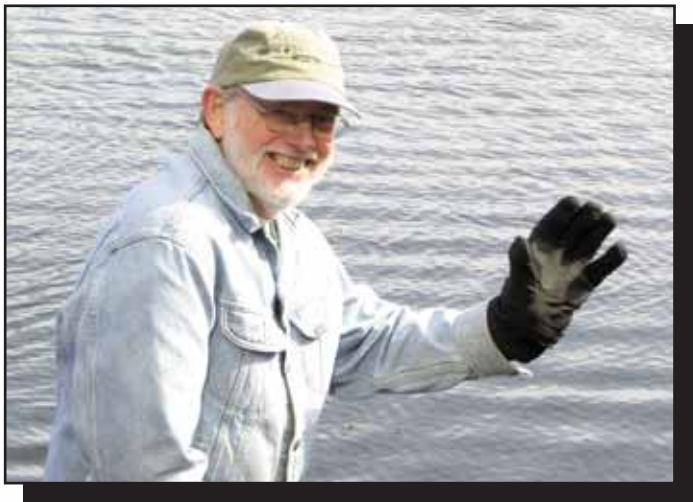
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**IN MEMORY OF WILLIAM WOOD** By Paul Olsen

I was very sad to hear the Bill Wood passed away recently. Bill joined our club in its early years. Even though he was last on the roster alphabetically, he was at the top of my list as a nice, interesting person.

The first time I met Bill, he was sailing "Leaking Lena", a bright yellow Fairwind with orange sails. More recently he was engineering and drafting, very professionally, a sailboat.

Farewell, and smooth sailing, Bill.



Photos of Bill Wood taken in April 18, 2009 at Centennial Lakes



**..WHICH WAY IS UP?**

By Captain David Robb

I have been in hundreds of boats shops over the last fifty years. Some people visit museums or old churches. I like boat shops. That's because everyone has a slightly different way of building them. It was a curiosity in my early years how a builder could construct a boat on the ways at an incline, upside down or right side up. The plans showed a level waterline that was parallel to the floor.

The famous Harvey Gamage, the Schoonerman, age 82 out of Maine explained it to me in his cherished down east style.

"Well, sonny, buildings are built on four points called corners. Boats are built on one." "OK, I'll bite. Where is it?" I asked knowing I was laying my neck on the block.

"In space," was his glib reply. I usually hate guys like him but this was too good. "Huh?" I intelligently replied.

"There is one place in space where the vertical plane (up and down) intersects with the transverse plane (left & right) and the longitudinal plane (fore & aft). It's called the Center of Buoyancy and sonny, it don't give a damn where the floor is."

Thus endeth Sonny's lesson.



## EDINA MODEL YACHT CLUB

Centennial Lakes Centrum  
7499 France Avenue South  
Edina, Minnesota 55435  
www.emyc.org



## MARCH MEETING

TUESDAY, MARCH 20, 2012 7:00 P.M.  
CENTENNIAL LAKES GARAGE BAND ROOM

### AGENDA:

- Tony Johnson: Sailing topic
- Show 'N Tell: Bring your building projects

### Special Interest Contacts:

#### Scale Boating:

To Be Determined (Anybody Interested?)

#### Sail Boating:

Tony Johnson [REDACTED] [REDACTED]

#### Fast Electric:

Dan Proulx [REDACTED] [REDACTED]

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The Edina Model Yacht Club Sail & Scale Newsletter is published monthly except for December.

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Please send articles by email to:

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Deadline for articles to be considered for the  
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