

## SAIL & SCALE

NEWSLETTER OF THE EDINA MODEL YACHT CLUB

April 2000

Volume 9, Number 4

**Commodore's Corner:** We will be getting the season underway this month with the Park cleanup day. Meet at 10:00AM on Saturday the 15<sup>th</sup>. We will set the buoys on the North pond and straighten up our space in the garage as well as pick up the park area. I hope all of you can take a couple of hours and join in the cleanup effort on Saturday.

The Fast Electric guys already have their course set up in the South pond and will be racing on Thursday nights throughout the season. Contact Dan Proulx if

you're interested in racing.

We were going to go over the plans meeting for the Parade of Boats at the April meeting, however, John Bishop is not available, so we will postpone that topic till the May meeting. George Pfeifer will show and tell us about his most recent masterpiece, the battleship Missouri, at the April meeting. You don't want to miss this! See you all Saturday for park cleanup. Thanks again,

Where's The Meeting?: We should be meeting in the Centrum through November. The only exceptions will be on those evenings that the building is rented out for private functions. We will post a notice on the Centrum door in that event.

What's The Meeting?: George Pfeifer will show us his resurrected Battleship Missouri. Don't miss this, our club's most famous Phoenix, risen from the ashes.

Speed Control: If you are looking for a speed control for your next, larger scale boat, check the Astro Flight 208D. This 25 amp unit weighs 1 ounce, operates on 6 to 12 volts (6-10 cells) and incorporates a 2 amp BEC. It is current limited to 28 amps, so there is no need for fuses. Tower Hobby lists this \$150 ESC in their annual catalog for \$110, but it occasionally appears in their "sale" catalog.

John Bishop

Another Parting: We are about to loose another local hobby shop. Hobby Depot, 1208 East 66th St. in

Richfield is closing its doors at the end of May.

During the month of April, all merchandise is reduced 30% from the price marked. During May, any remaining merchandise will be sold at 40% off. As the name implies, the Depot is primarily railroad orientated, but brass tube and sheet, Plaststruct, paint, wood, adhesives, hardware, etc., are all usable in our hobby as well.

George Pfeifer

New Kit & Engine: In May, Midwest Products will introduce their first scale R/C boat kit featuring a vacuum formed hull and deck for simplified assembly! The Elliott Bay Steam Launch is a 1" = 1' scale model of a Fantail Launch built by the Elliott Bay Steam Launch Company in Portland, Oregon. Designed especially for use with the new Midwest Heritage preassembled steam engine, the kit features mahogany interior parts, authentic fittings, running hardware, brass propeller and illustrated Success Series Construction Manual. Length: 25-1/4".

Kit #988. Price: \$149.99.

Midwest's new, Heritage Steam Engine, 3/8" bore, 1/2" stroke, has most of the "heavy work" (soldering) done for you. It takes about one hour to assemble, and runs for about 30 minutes on a can of Sterno.

Kit #987. Price: \$124.99

For additional information, contact Midwest Products directly at 1-800-348-3497.

Ed Rogala

**Ni-Cds:** Spring is battery replacement time for many of us. Remember that the Cadmium in Ni-Cd cells is a heavy metal, which should be disposed of properly (recycled). My local Lunds grocery has a battery drop-off barrel in the lobby. Most hardware stores accept used batterys too. DO NOT dispose of Ni-Cd cells in your regular garbage.

**Endurance:** Within the year, Columbia Pictures plans to start filming an epic movie about the stranding of Ernest Shackleton, the *Endurance* and her crew in Antarctic ice for 15 months during 1914 - 1915. "There's hardly an actor in England," says producer Gail Katz "who isn't interested in playing the part of Shackleton."

There's hardly a person who read the recent book on the subject who won't be standing in line to see the movie either, says I.

**Planking:** The Bloomington AxMan store has beautiful, <u>clear</u> basswood, 2" wide x 5/8" thick for 25¢ per running foot. Lengths vary from 24" to 78". Ripped to a 1/8" or 3/16" thickness, they'd make excellent hull planking, especially for bigger projects, for which, long strips are very hard to come by. They also have a small amount of 1/8"x 2"x 24" basswood.

Membership Meeting, 3/21/00: Commodore called meeting to order at 7:15PM. 41 members and guests in attendance. Commodore noted that the ponds are down a few inches. This should be temporary. Construction will begin shortly around the north pond. Several million dollars are going into the project. D.Person suggested that we attempt to get a club photo on the cover of Edina's annual directory for '01. There is a picture of the pond on this year's booklet, but no boats. G.Merrill suggested open boating commence earlier on Sundays. He'd like a 3PM start time. Commodore received a letter from Midwest Products offering assistance to the club. Perhaps, door prize(s)? Midwest also would like our input regarding future product offerings such as new models, field box, boat handling cradle, etc. Garage clean-up still awaiting a day. Perhaps it will be combined with park clean-up day on 4/15. Board has already commenced planning for Parade. Volunteers needed to head up various job categories. A two page insert will be enclosed in an upcoming (probably, May) newsletter. Commodore announced that C.J.VanVoorhis had been awarded second place in a Twin Cities gas boat club event. J.Bishop showed a miniature, LED voltmeter for which he will work up a bulk order (\$10 each).

Commodore introduced Robert N. Steinbrunn of Eagan, MN who gave a presentation on and answered questions about his outstanding scale model of the WW II Destroyer, USS Kidd.

Show-'n-tell: D.Campbell showed his 1:8 size hydroplane. I' is based on the Amati kit, but all parts have been replaced with lighter materials. In Doug's opinion, the boat, as kitted, would be much too heavy to get up on plane. A. Valentine showed his new "TJ's Performance Boats" 3 point hydro. Not much boat there...just enough to hold the required mechanicals out of the water until the motor causes it to "fly". T.Splettstoeszer showed off a Lindberg harbor tug that his ten year old son, Chad had built. J.Schermeister showed his Sterling, 63' Chris Craft motor yacht. It sports a full galley and a custom built, twin output gear box. J.Schulz, a visitor from Rochester showed a small, cabin craft which he claimed to have built in about three hours. (Watch out, George, your fast building skills are about to be challenged!, Ed.). D.Person showed the latest Team Mates catalog. Club logo emblazoned shirts, caps, etc., are available through Doug, or direct from Team Mates. If you are over or undersized, or just don't like the large selection offered by Team Mates, they will embroider your own item for about \$6 - 8.

#### Schedule Of Upcoming Events

	Every	Sunday Open Boating Tuesday Open Boating Thursday Open Boating	4:30PM - 9:00PM 5:30PM - 9:00PM 5:30PM - 9:00PM		
Apr.	15 <sup>th</sup> (Sat.)	Park Clean-Up & Buoy Set	Centennial Lakes	9:00AM - 2:00PM	
	15 <sup>th</sup> (Sat.)	Great Lakes Shipwreck Soc.	Roseville Area High School	Noon - 5:00PM	
	18th (Tue.)	Membership Meeting	Centennial Lakes Centrum	7:00PM - 9:00PM	
	22 <sup>nd</sup> (Sat.)	Toy and Model Boats Show	Hopkins House Hotel	8:00AM - 2:30PM	
	29th (Sat.)	'Round the World Poker Run	North and Central Ponds	2:00PM - 4:30PM	
May	16 <sup>th</sup> (Tue.)	Membership Meeting	Centennial Lakes Centrum	7:00рм - 9:00рм	
Jun.	11th (Sun.)	Parade of Boats	Centennial Lakes Centrum	10:00AM - 5:00PM	
	20 <sup>th</sup> (Tue.)	Membership Meeting	Centennial Lakes Centrum	7:00PM - 9:00PM	

**LED:** If you choose to use light emitting diodes (LEDs) on your boat, you can regulate the voltage emanating from your battery pack to the lower voltage required by the LED by using a resistor. Its value is calculated by subtracting the rated voltage of the LED from the battery voltage, and then dividing by the LED's rated amperage in full amperes (e.g. 30mA=.03A).

Assume that your battery is 12 volts, and you plan on using an LED rated at 2.7 volts and 30 milliamps. 12v - 2.7v = 9.3. Divide 9.3 by .03, and your desired resistor is 310 ohms. 330 ohms is the nearest 'standard' value. That'll work fine. A lower value will give brighter light...with corresponding, shorter LED life. Adding 20% to the calculated resistance will not dim the light very much but will increase its longevity several fold. Since watts equal voltage multiplied by

amperage, it is a simple matter to determine the wattage rating for the resistor, 1/4 watt being sufficient for most single LED applications.

The same formula will work for incandescent lights. Just make sure that you total the amperage of all of the bulbs in the circuit before doing the calculations in either the LED or incandescent instance.

Wet or ?: When wet sanding a fiberglass, plastic or painted hull it is impossible to see if the low spots are sanded out. When dry, the low spots show up as shiny, but as soon as the water hits the surface, the entire area becomes shiny. If you apply waterproof black laundry marker to the low (shiny) spots, you will observe the marker disappear as the low spot is abraded by the sandpaper. Repeat the application of the marker as necessary.

Ship Modeling Books: Another new book is The Complete Marine Radio Manual, by Hugh Bright. Mr. Bright has a monthly column on Marine Modeling International and has been modeling for over 60 years so you could say he has some experience. The manual just published is all about the electric and/or electronic working systems on a RC boat. Some of the topics covered fusing, include servos. battery and maintenance, motor suppression and "noise" reduction, lighting and sound systems and location. etc, etc. For the novice modeler it would probably be a very helpful manual, as it will open your eyes to all the electric and electronic mambo-jambo in the hobby. Being just released you know the information is also up-to-date. I just received my copy and can tell you that it will help me a great deal. Then again, I need lots of help! Retails for about \$25.00

Both books can be purchased through www.traplet.com or you might want to check Barnes & Noble at www.BN.com as they usually are a bit cheaper.

Another two books that have been on the shelf for a little longer, but worth mentioning are Working Scale Model Merchant Ships and Scale Models Tugs and Trawlers, both by Tom Gorman. Mr. Gorman is a very experienced modeler also from the UK. His books take you through the construction aspects of these types of models. I have Working Scale Model Merchant Ships and really enjoyed it. It walks you from how to choose the right model to picking your power plant to giving you ideas on how to include the little add-ons that make your model stand out from the rest. There are also lots of tips on different aspects of ship modeling and construction. I would highly recommend it to the novice modeler.

Scale Model Tugs and Trawlers looks like a great book to have for modelers who wish to build tugs or fishing boats of the powered type. Fully illustrated throughout with photographs and sketches, the book covers the construction of models both from scratch and kits. Information is given on drive equipment and radio control for the working model, ballasting and testing before sailing. Tools and their uses are also described with details of suitable materials, their care and painting. The appendices, in WSMMS, offer complete lists of suppliers of materials and sources of kits, but unfortunately most of the author's information is based in UK shops and brands. Fellow modelers in the UK tell me this is a great book. Diego Gaston

**Lines:** Since it is about time to get that new boat painted and into the water, I have enclosed plans for a very nice waterline marking tool designed by Bob Harmon of the St. Louis Admirals.

More Stuff For your EMYC Source List:

Since we don't have the EMYC Source List on our club website yet, here are a few new links:

Dictionary of naval terms: For those of us learning the proper terminology (i.e. Bow instead of... front of the boat) this will come in real handy. Some of the terms have pictures linked to them to make things even more clear. Located at:

http://www.purgit.com/dictiona.html

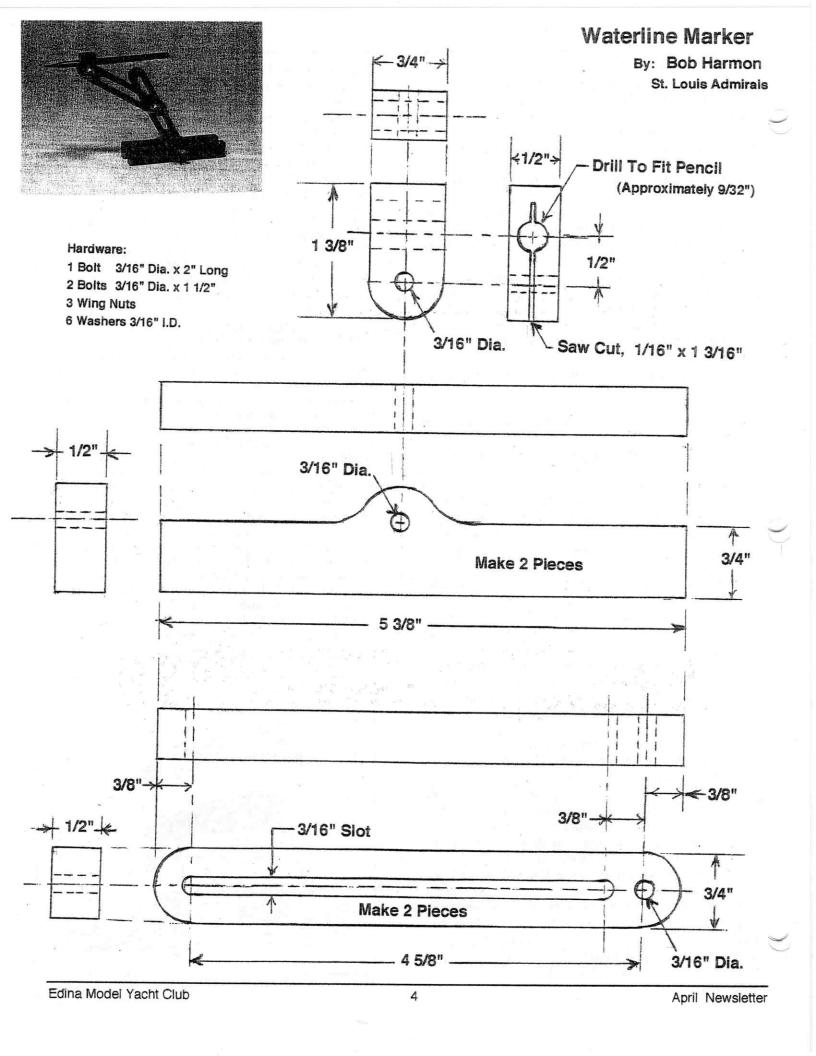
Micro-Tools.com not to be confused with Micro-Mark. This place sells only tools and lots of them. I have not had the opportunity to check them out thoroughly, but I noticed some items were quite a bit cheaper at Tower Hobbies or Micro-Mark, and with some others, Micro-Tool had a better price. You know the golden rule; compare before you buy. They can be found at:

http://www.micro-tools.com

Metcalf Mouldings: Mr. David Metcalf has been on the UK modelling scene for quite some time. If you read some of the British model press, you have most likely already heard his name. He started his own company fairly recently (you can read the story on his website) and now provides a large range of GRP hulls that to me seem to be at a pretty decent price. He also offers what he calls "Hulls & Packs". These packages, while not a "kit" model per-se, are a combination of GRP hull, drawings, set of materials from which to scratch build the parts, and construction manual. I think they can possibly be a great way to make the jump from kit building to scratch building since you are somewhat in the middle. You can follow the instructions, you don't have to figure out what materials would be best suited for a part as they are included, but you still have to scratch build the part from the provided materials and work from a drawing or print. His first, and only full kit at the moment, the "Ann Letitia Russel" has already received awards in the UK. He can be found at his new website

http://business.virgin.net/metcalf.mouldings/catalogue.htm





#### Edina Model Yacht Club

#### 2000 Membership

Apr.7, 2000 Page 1

<u>Name</u>	Address	City	Zip	Phone	Boat(s) Year
Anderson, Gary		Chanhassan	55317		00
Anderson, Glenn		West St Paul	55118		OQC 00
Armstrong, Tyler (youth) Bach, Bill		Edina	55424 55437		S 00
Bach, Bill (Sr.)		Bloomington St. Cloud	56303		(NAFTS) 00
Bailey, Bret		Chanhassen	55317		F 00
Banicki, Mike		Mound	55364		T 00
Baskerville, Marty		Minneapolis	55344		FA 00
Bishop, John		Edina	55424		FSCT 00
Blaha, Kyle		Eden Prairie	55344		PW 00
Blais, Harold Bolen, William		Bloomington Bloomington	55420 55431		F 00 O 00
Bomberger, James		Hinkley	55037		FS 00
Bongard, Ron		Eagan	55123		FTW 00
Bottemiller, Karl		New Hope	55428		CT 00
Brenhaug, Jeffrey		Hutchenson	55350		F 00
Bros, David		Minneapolis	55424		OTWS 00
Brust, Kirk Campbell, Doug		Richfield	55423		CW 00
Dodson, John		Minneapolis Shorewood	55417 55331		MCSI 00 A 00
Dussol, Pierre		Hopkins	55305		A 00 F 00
Edge, Dick		St. Paul	55106		OPSW 00
Erickson, Tom		Edina	55424		00
Field, Orrin		Edina	55435		F 00
Frank, J.W. "Bill"		Roseville	55113		A I 00
Freeman, Warren Gaston, Diego		Plymouth	55447		FT 00
Gerstein, Doran		Savage Minneapolis	55378 55419		FT 00 W 00
Gilbert, Gregory		Crystal	55429		CP 00
Gilbertson, Jack		Woodbury	55125		TP 00
Heebink, Robert		Edina	55435		00
Hershey, Kimberly		St. Louis Park	55426		TO 00
Hughes, James		Apple Valley	55124		OP 00
Iverson, Kenneth Jester, Robert		Edina St. Louis Park	55439 55416		TP 00 FAO 00
Johnson, Dale		Bloomington	55425		FP 00
Johnson, Larry		Prior Lake	55372		FAO 00
Johnson, Ray		Orono	55356		0 00
Johnson, Tony		Excelsior	55331		FAOI 00
Jones, Robert		Holliston, MA	01746		FEPT 00
Kartes, Tony Kirihara, Mikio		Bloomington Bloomington	55420 55420		F 00 MOP 00
Larson, Robert		Edina	55424		FSW 00
McCabe, Jeff		Bloomington	55431		FMCT 00
Merrill, George		Roseville	55113		TCW 00
Mielke, Robert		Big Lake	55309		F 00
Mikkelson, Paul		Willmar	56201		Toy Boats 00
Nelson, Allan Norton, Alan		Minneapolis Deephaven	55417 55391		W 00 OP 00
Norton, Max		Apple Valley	55124		FS 00
Olsen, Paul		Bloomington	55420		FMOT 00
Parry, Dick		Edina	55436		PS 00
Patterson, Donald		Plymouth	55447		00
Person, Douglas		Edina	55435		FO 00
Pfeifer,George Phillips, Gary		Bloomington	55425		FTWP 00
Pierce, Harold		Eagan Shorewood	55123 55331		FWTS 00 FT 00
			00001	30L 410 1300	11 00

Sailboat Codes: F=Fairwind, E=12-M, M=Marblehead, A=CR914 Non-Sail. Codes: C=Commercial / Workboat, T=Tug, P=Pleasure, S=Speedboat, W=Warship / Military,

O=Other Sail I =Iceboat

Q=Other Non-Sail

#### Edina Model Yacht Club

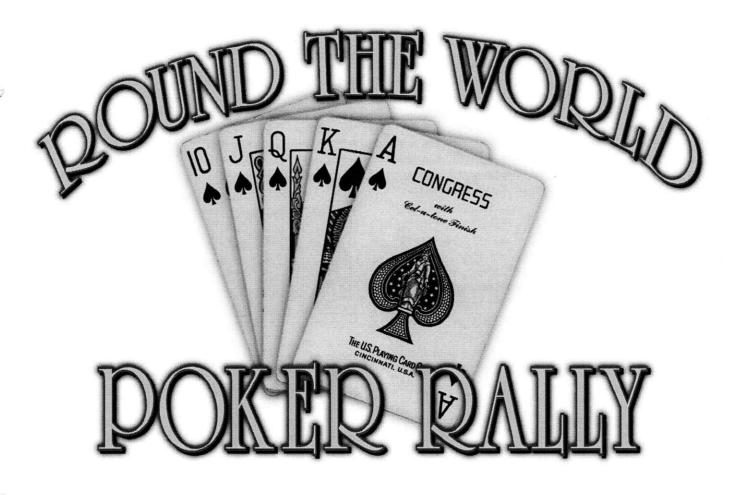
### 2000 Membership Apr.7, 2000 Page 2

Name	Address	City	Zip	<u>Phone</u>	Boat(s)	Year
Proctor, Harry		Minnetonka	55343		FOS	00
Proulx, Dan		Maple Grove	55369		SCW	00
Raupp, Alex		Minnetonka	55343		FO	00
Richards, Jay		Bloomington	55437		P	00
Rogala, Ed (Midwest Prod.	)	Hobart, IN	46342	x32	9) W	00
Schermeister, John		Brooklyn Center	55430		TCP	00
Sigvertsen, Jene		Woodbury	55125		MO	00
Simenson, Yvonne		Edina	55435			00
Smalley, Timothy		Apple Valley	55124		WQ	00
Smith, Don		Cologne	55322		PSW	00
Smith, James		Bloomington	55437			00
Splettstoeszer, Chad(yth	1)	Delano	55328			00
Splettstoeszer, Terry		Delano	55328			00
Stevenson, Erwin		Chaska	55318			
Stoltenberg, Ken		Rochester	55906			00
Studnek, Richard		St.Paul	55104			00
Sturmer, Paul (youth)		Mendota Heights				00
Swain, Donald		Minneapolis	55411			00
Swanson, Gary Thoms, Howard		Bloomington	55431			00
Valentine, Andy		Bloomington	55437			00
VanVoorhis, C.J.		Oakdale	55128			00
Walker, Dick		St.Paul	55108			00
Wheeler, Larry		Edina	55423			00
Wicks, Tom		Minneapolis Eden Prairie	55410			00
Young, Tom		Bloomington	55347 55437		F	00
		Diodrinigion	JJ <del>1</del> 3/		Г	00

Sailboat Codes: F=Fairwind, E=12-M, M=Marblehead, A=CR914 O=Other Sail I = Iceboat Non-Sail. Codes: C=Commercial / Workboat, T=Tug, P=Pleasure, S=Speedboat, W=Warship / Military, Q=Other Non-Sail

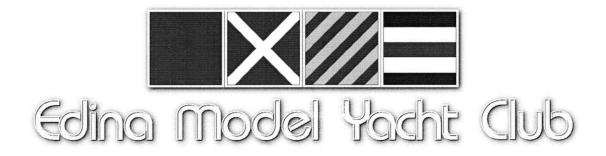
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Name	Address	City	Zip	<u>Phone</u>	Boat(s) Y	'ear
Anderson, Marlyn Bosworth, Simon		St. Louis Park Eagan	55416 55122		Р	99 99
Crawford, Rod		Excelsior	55331		AMO	99
Dahlen, Dean		Bloomington	55431		7	99
Delaney, Brian (youth)		Woodbury	55125		F	99
Evans, Homer "Chip"		Minneapolis	55416		O	99
Ferris, Fred	- 1	Burnsville	55337		O	99
Finks, Brian (youth)	- 50	Bloomington	55437		S	99
Gjerdingen, David		St. Paul	55116		FS	99
Gustafson, John		Burnsville	55337		FP	99
Hofius, Walter		Bloomington	55437		F	99
Jacobson, Richard		Bloomington	55438			99
Lammie, P. "George"		Minneapolis	55407		OS	99
LaVenture, A.J. (youth)		Edina	55436		S S	99
Mellin, James II "Jae"		Bloomington	55437		S	99
Mellin, James P "Pat"		Bloomington	55437		0	99
Pearson, Donald		Deephaven	55391		Ships-in-Bottle	99
Pederson, Eric	- 1	Bloomington	55420		S	99
Peter, Ralph		Richfield	55423		AO	99
Porter, Fred	- a)	Bloomington	55437		W	99
Schmit, Steven	. "	Minneapolis	55417		O F	99
Semsch, Mike	e a f	Edina	55436		F	99
Semsch, Nathan (youth)	t and	Edina	55436		S	99
Traiser, Christopher	fi 8	Woodbury	55125		MO	99
Ulmer, David Wald, Dave		Richfield	55423		FS	99
Watkins, Tom		Fairmont	56031		FO	99
Westley, Don	1 3	Edina	55435			99
Whitcomb, Chuck		St.Louis Park	55416		A	99
Zbikowski, Andrew		Burnsville	55337		S F	99
ZUMOWSKI, AIIUIEW		Corcoran	55340		F	99



## At Centennial Lakes Park 2:00pm Saturday, April 29, 2000

A Sail event that will run the boats from the North Pond to the South Pond and back. At Several checkpoints in the race, a card will be issued to the contestant, and the one with the best poker hand at the end wins. All EMYC members are invited to attend the first Sail event of the season.



Sunk!: I received a copy of The Terrible Hours, the story of the 1939 sinking of the USS Squalus, by Peter Mass, as a Christmas gift. The book has been making the rounds of club members since I finished

reading it in just two days.

I found a letter to the editor in the Washington Post of March 19th which, I believe, should be noted with interest. The letter states: "I am responding to Bill Gifford's review of The Terrible Hours: The Man Behind the Greatest Submarine Rescue in History by Peter Mass. In it, Gifford writes: "U.S. subs had sunk before; not one sailor had ever been retrieved alive."

"My father (at that time Lt. Cmdr. Charles M. Cooke, later Admiral) was Captain of the U.S. submarine, S-5, which sunk off Cape Henlopen, Del., on Wednesday, Sept.1, 1920, during a crash dive test as they were going from New London to Newport News on a shakedown cruise."

"As the crash dive began at 1:50 p.m., the overboard ventilation valve had not been closed, which resulted in tons of water flooding the submarine. The valve was finally closed, but despite blowing all ballast and taking all engine and rudder measures to stop the dive and regain control, the sub continued to sink and finally hit the ocean floor at about 200 feet of depth."

"My father calculated that the length of the submarine was greater than the depth of the water and that, if they could shift all the water to the bow of the sub, the stern would stick out of the water and they might be able to drill a hole in the hull of the sub to escape. This was done until the sub was at a severe angle. By tapping the hull they knew the stern was out of the water."

"An unfortunate outcome of shifting the water was that the battery compartment was flooded. Despite the hatch to the battery being completely dogged down, chlorine gas began seeping through where the crew was huddled in the small stern compartment."

"Another difficulty arose when the drill being used to make the hole in the hull could only be powered by attaching it to batteries that had been brought out of the battery compartment prior to closing the hatch. The men operating the drill were constantly being zapped by the current as they operated the drill. When the first half-inch hole hit air, a huge cheer went up."

"Because of the chlorine gas, men could only operate the drill for short periods of time, but every one took his turn. By 2 p.m. the next day, a hole the size of a dinner plate had been drilled. My father stuck his shirt out the hole on a broom stick hoping to attract a passing ship."

"Not too much later, after the hole was drilled and the shirt flag flown outside, a passing ship, the Alanthus, saw the stern of the sub and the white flag,

thought it was a buoy but discovered as it came near that the buoy was a submarine! Unfortunately, the Alanthus had no drilling equipment or radio, but she could--and did-- put an air hose into the sub, which relieved the chlorine problem significantly."

"The Alanthus then flew distress flags and eventually attracted a U.S. Army transport ship, the General Goethals. That ship did have drilling equipment and radio. They immediately began widening the hole in the hull and radioed the Navy."

"Approximately 43 hours after the sub had sunk, the last sailor (my father) was hauled out of the submarine. Every sailor on board the submarine was rescued."

"The S-5 was never recovered. It still sits on the ocean floor off Cape Henlopen and, as I understand

it, is a big attraction to scuba divers."

"The story of Momsen and the Squalus [told in The Terrible Hours] is a story definitely worth telling, but it is not the first time in history that sailors were rescued from a sunken submarine. My father's skill and cool calm courage did that with the S-5 almost 20 years before the Squalus."

Charles M. Cooke, Sonoma, CA I referred to the Dictionary of American Naval Fighting Ships, at your library or on the web at:

http://www.uss-salem.org/danfs/ and found a slightly different story regarding the S-5. Mr. Cooke's letter, however, is a good read, and the Dictionary's version in no way detracts from the initiative and heroism demonstrated by the crew of the S-5 after she went down. If anyone wants a copy of the DANFS history of the S-5, give me a call and I'll bring one to the meeting for you.



# April Meeting Notice:

(Third Tuesday of the Month)
Tuesday, April 18<sup>th</sup>
7:00 P.M.

(Board Members Available at 6:30)

Centennial Lakes

Centrum

Commodore: Vice Commodore Vice Commodore Vice Commodore

Vice Commodore Vice Commodore Vice Commodore Vice Commodore

Newsletter Editor

Treasurer

Dale Johnson
Doug Campbell
Diego Gaston
Alex Raupp
Tim Smalley
Terry Splettstoeszer
Gary Phillips

Jim Smith

Web Site:

www.emyc.org

szer

EDINA MODEL YACHT CLUB CENTENNIAL LAKES CENTRUM 7499 FRANCE AVENUE SOUTH EDINA, MN 55435 FOR SALE:

Kyosho FAIRWIND II includes:

Futaba FP S125 Sail Servo,

New Mast, Ram Running Lights.

NO RADIO. PRICE \$ 150.00

Kyosho VIPER (Fast Electric) includes: Dumas 1/8th inch Drive Shaft, Graupner Trim Tabs, Hughey Speed Control, Midnight II Motor, 2 Futaba Servos.

NO RADIO.

George Pfeifer

Evenings...or see me at the pond.

PRICE \$ 100.00

First Class