The Broadaxe

Newsletter of the Ship Model Society of New Jersey
August 2018

In This Issue

Our next club meeting is
August 28th at **6:45PM**

ROSELAND PUBLIC
LIBRARY

JULY NOTES...

July Meeting. The meeting was opened at 1850 by President Chuck. Click here for photos. Chuck welcomed 17 members and four guests. Don Otis came with his wife Carol. It is always good to see Carol. Welcome! Douglas McKenzie came to his third meeting and was unanimously voted in as a new member. Welcome Doug. Our third guest was Tom Griffiths from Howell, NJ. Tom is a former ship model builder whose interests include warships from the 1890's to the beginning of World War II. He has built HO scale railroad oriented ships. Tom is moving to smaller quarters and will be selling off several items. He provided a list that we will share with the members so that they can contact Tom directly. Gail Hitchuk was our fourth guest. Gail has several kits she will never build and she is looking to sell them at some point. Chuck asked her to provide a list to us and we will check to see who might be interested. The meeting was adjourned at 2055, whereupon several members proceeded to the Caldwell Diner.

Treasurer's report. Tom Ruggiero reports that we have a good balance in the Club account. We have switched banks. Tom also noted that there are a few members who have not yet paid their dues. If you won't be attending our next meeting, please mail a check to Tom. His address is on the last page.

Next Month's Meeting. Tuesday, August 28th.

Saturday Workshop. The next Saturday Workshop will be held on August 25th at Tom Ruggiero's house. Note the new location this month.

Tech Session. The August Tech Session will be making mast and yardarm bands, presented by Doug McKenzie.

OLD BUSINESS

Hats and Shirts. There is interest in new club hats. Tom will be looking into hats and shirts as well as possible patches.

July's Saturday Workshop. The last workshop was a big success with eight people attending. Everyone brought something to work on and Chuck encourages you to come to the next one.

UPCOMING EVENTS

AUGUST

25 - Group Working Session
28 - Monthly Meeting
6:45PM, Roseland Public Library,
1st Floor

SEPTEMBER

TBD - Group Working Session
25 - Monthly Meeting
6:45PM, Roseland Public Library,
1st Floor

OCTOBER

TBD - Group Working Session
23 - Monthly Meeting
6:45PM, Roseland Public Library,
1st Floor
25-27 - NRG Conference, Las Vegas, NV

Group Build. Chuck reported that our group build will be of the long boat that he is currently developing. The goal is that we set aside a day where we all work on this project and learn from each other. As an example of the topics we will be covering, we will be showing how to line off and plank. We also plan to demonstrate sail making. If the group gets too large, we may set up an additional day at the library. At the July meeting, Chuck showed the progress that he has made on the prototype having installed the first seven strakes. He brought in *The Boats of Men of War* by WE May, a book that includes all the scantlings and details for the various boats carried aboard sailing ships from 1650 to the 1900s (see Books and Pubs below).

Future Meetings. Vice President Larry mentioned that, following earlier negotiations, we are good for our normal Tuesday meetings at the Roseland Library into the foreseeable future. We will likely be making a donation to the library. We have decided that we will not have a regular meeting in December as the meeting room is used for a train display (one we have already seen a few times), and we are limited in what we can cover in the Children's Area, the section we have been using for our December meetings over the past few years. Instead, we are thinking about having a dinner or some other festivity.

NEW BUSINESS

Ships in Scale. Tom Ruggiero, who is a Nautical Research Guild Director, reported that *Ships in Scale* Magazine has ceased publishing. The Nautical Research Guild has acquired the intellectual rights to *Ships in Scale*, although the NRG will not be publishing the magazine. The *Nautical Research Journal* will be expanded to include articles that will be targeted to beginners and intermediate model builders to fill the void left by SIS going out of print. The NRG is doing this because with the demise of *Ships in Scale*, there are no English language publications dedicated to ship modeling. The NRG will make the SIS CDs, plans, etc. available on the NRG Website in the near future. Also, the series that were not finished in SIS will be completed in the NRJ.

Caldercraft *Victory* Kit. Larry notes that Mort Stoll has a mint, in-the-box, *Victory* kit. It is a jewel that sells for over $1000. It is simply too big for the space that Mort has available. He will part with it for $850. If anyone is interested, contact Larry.

Books and Magazines from Al Geigel. Our good friend Al had a very comprehensive library and his family wishes to get them to a good home. These include *Model Ship Builder* and *Ships In Scale* going back to the '70s, and many of the must have ship modeling books. Al's son-in-law Wayne Simpson, who used to belong to this club, will be helping. Tom R. plans to catalog the collection and distribute it to SMSNJ members.

Survey Results. Larry presented the results of the survey that we conducted at the June meeting and distributed a hard copy. There was good discussion about the findings. Things to consider going forward are the visibility of the Tech Sessions, i.e., being able to see them more clearly. Another item was making the Tech Sessions available for viewing later, although, as it was pointed out, we used to record every Tech Session and the recordings were never requested. It was asked if some Tech Sessions could be repeated for the more recent members. The survey listed many topics that the members wanted covered, but very few that members were willing to present. One thing to consider is taking the Tech Session information out of the *Broadaxe* and putting it on our website. Larry asked that others present Tech Sessions at

future meetings instead of the few who do them now. Chuck noted that one of the survey questions asked what models members are currently working on. The list was long, yet very few of these works-in-progress have been brought to meetings. Chuck asks that the members bring in their models, no matter what their stage of completion.

Website Gallery. Once more, Chuck requests that we take detailed digital photographs of our completed models to display on the website. If you do not have the equipment or desire to take the photos, bring them to a meeting and Steve Maggipinto will take the pictures for you.

TECH SESSION

Mast Coats and Wedges

The Tech Session at the July meeting was "Making Mast Coats and Wedges" presented by Tom Ruggiero. The masts of a ship mount to a mast step which, except for the mizzen mast, is on the keel of the ship. The mast passes through the deck and is maintained vertical by large timbers called partners. However, the partners do not contact the mast. The reason is that when the mast is stepped, you do not want to have any friction between the mast and the partners that would cause a downward load on the deck. Once the mast is seated in the mast step, wedges are inserted into the gap to keep the mast vertical, and to establish the amount that it tilts (rake) fore and aft. In fact, captains have been known to adjust the rake of the mast by removing or repositioning the wedges.

The wedges are only installed at the point where the partners are located. On decks that are exposed to the weather, there needs to be a way to seal the mast so water doesn't leak in. These seals are called mast coats. So, in the case of the frigate that Tom is building, the mast partners are all located on the gun deck. The Fore and Mizzen masts pass through the forecastle and quarter always, a little undersize is better than oversize.

The method that Tom uses to make either of these starts the same way. You want to begin with a hard, straight-grained wood. Box is ideal, but it would be okay to use Swiss pear if the pieces are in larger scales.

The wedges form an octagon. Using that High School Geometry that you saw no use for at the time, a circle circumscribing an octagon is 360 degrees. 360 divided

by 8 is 45 degrees. So, the central angle is 45 degrees. However, you want the grain of the wood to run tangent to the center of the octagon. You could simply cut 45-degree angles by cutting the wood strip twice, but it is simpler to use the opposite angles and simply flip the piece and cut once. Again, from geometry, the sum of the angles of a triangle is 180 degrees. Our wedges have a central angle of 45 and two equal length sides (an isosceles triangle). So, 180 minus 45 equals 135 degrees. Since there are two identical angles, 135 divided by 2 is 67.5. So, set your angle at 67.5 degrees (the Byrnes saw has that angle pinned). If you don't have a table saw with a miter you could use a miter box, but in that case you will need to make two cuts at 45 degrees, as most small miter boxes do not have the 67.5 degree slots.

You are going to edge glue eight wedges together. There needs to be a hole in the center for the mast. Although you could bore the hole with an end mill, a regular fluted drill bit will simply break it apart. A way to prevent this is to remove the tip of the triangle. To do that, get the radius of the mast at the point where the coat or wedge will be installed. The radius is half the diameter. The radius is marked off from the 45 degree angle up one side. However, because the piece is very small, and to leave yourself a little margin, you can take

the length from the 45 degree angle up. Slice off the same amount on all eight wedges. Remember, less is okay, more is not good.

Next, glue the eight wedges together. I use wood glue. For me, cyano would not work for this. Make sure that the joints are tight. It is very important that you let this cure completely; put it aside for at least an hour. After the glue is cured, round out the hole with a micro-chisel and finish rounding out the hole with a small riffler file or blade. I do this on a bench extension so that the glued pieces are completely supported. Check to see that the hole is large enough. GO SLOWLY!

Now, trim the outside of your assembly. It the wood is thin, a razor blade or number 11 X-acto blade works fine. Now comes the really delicate part. If this is going to be a wedge, just round off the top outside edge (knock off the sharp edge). If you need a mast coat, slice off the corner of each wedge to make the outside 16-sided. Supporting the assembly as best you can (bench extension, etc.) round it off and then, as with the edges, round off the top outside edge (knock off the sharp edge).

Finishing is your license. Tom has seen the actual coats on several replica ships like the Peking. Typically, these were coated with a canvas cover. Chuck noted, models in larger scales in some contemporary and ornate models made these out of a carving that was heavily decorated. Again, that's up to you. You will be surprised and pleased with the result. For some examples of mast coats, click here.

BOOKS AND PUBS

THE BOATS OF MEN-OF-WAR
    — W E May, brought in by Chuck Passaro

In the age of sail, the boats carried by the men-of-war were an essential part of the ship's outfitting. Over the centuries there have been many sizes, hull forms, and rigs employed, so the exact details proved a problem for model makers. In 1974 the original edition of this book was published by the National Maritime Museum at Greenwich, England. Still the only complete study of this topic, the book has been revised to include more illustrations. It covers the sizes and types of boats formally allocated, the methods of hoisting and stowing them aboard ship, and the design and construction of the boats themselves. Available from Amazon: click here.
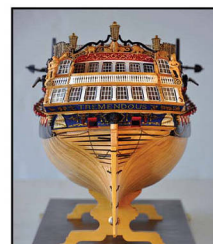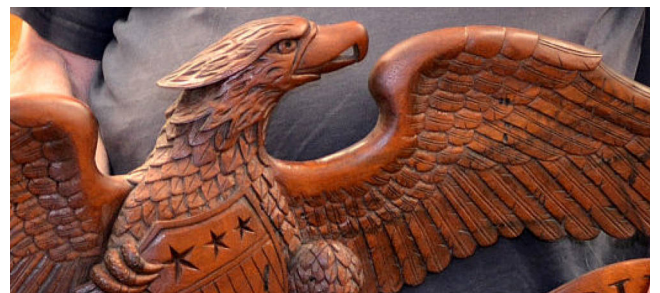
SHOW AND TELL

HMS *Liverpool* (1757) — Tom Ruggiero

Tom brought back *Liverpool* with the mizzen mast stepped and shrouds in place. The mizzen sail has been laced to the mast since the last showing. Next up is a permanent base and then crossing the main course yard.
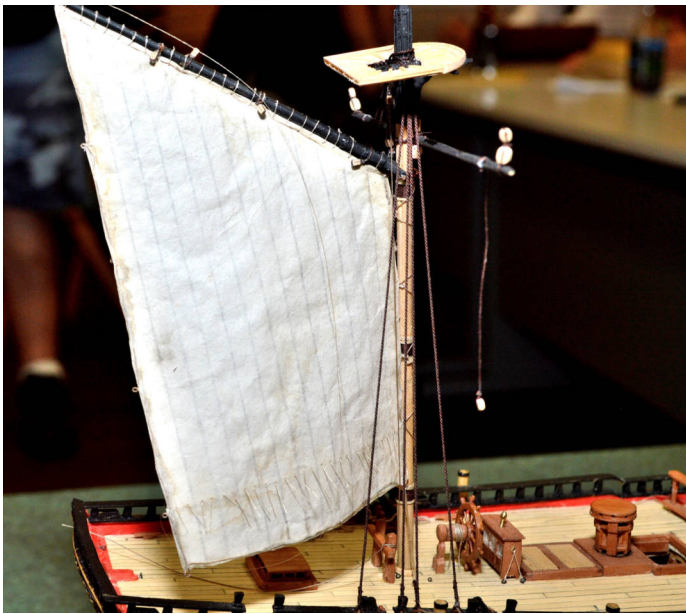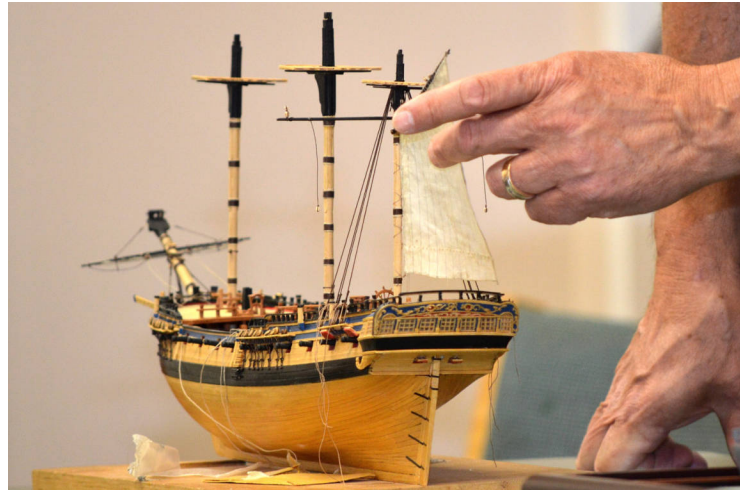
Eagle Carving — Kurt Johnson

Kurt brought in a handsome carving of an American Eagle. The wood is Philippine mahogany, and the Eagle measures 16 inches by 4 inches by 4 feet. Kurt used chisels exclusively. The carving's banner includes the New Hampshire State Motto, "Live Free or Die." It really looks great, Kurt.

**SHOW
AND TELL**

Sea Witch — Bill Brown

The original *Sea Witch* was built in 1846. The model is 1:96 scale with a hull length of 24½ inches. Bill is restoring this work started as a Marine Models Kit circa 1952. He had to photographically reproduce the plans using Charles Davis' book for reference (although the ship on the cover is not *Sea Witch*). Bill has done a tremendous job in refurbishing the model to this point (see photos in the last *Broadaxe*). He will not completely rig her, but will install the lower masts and associated rigging. He will be looking for methods to put the ship's name on the stern. A great looking model, Bill.
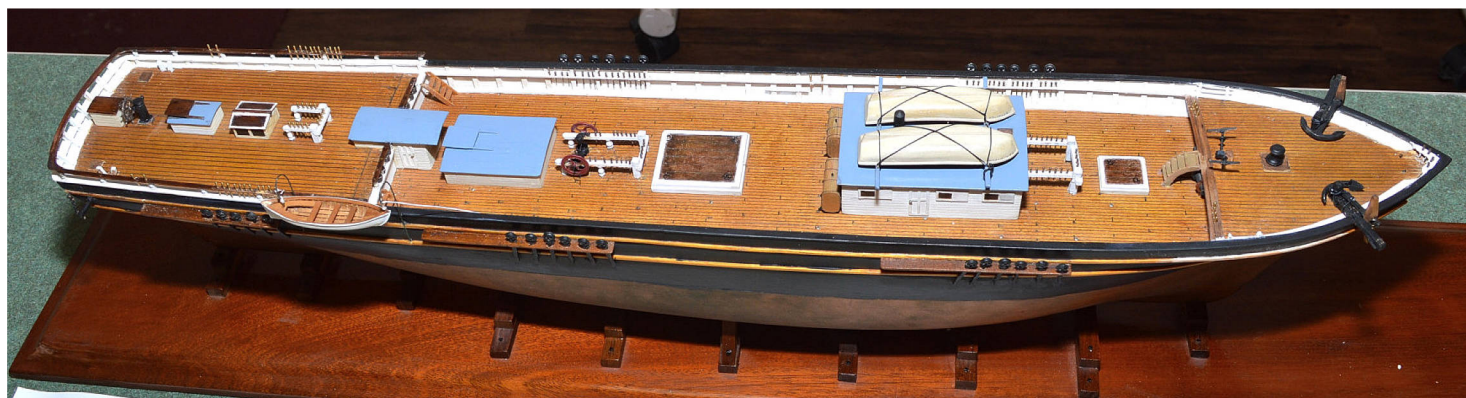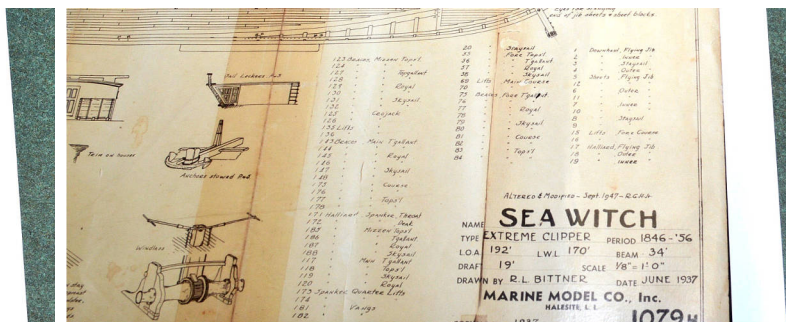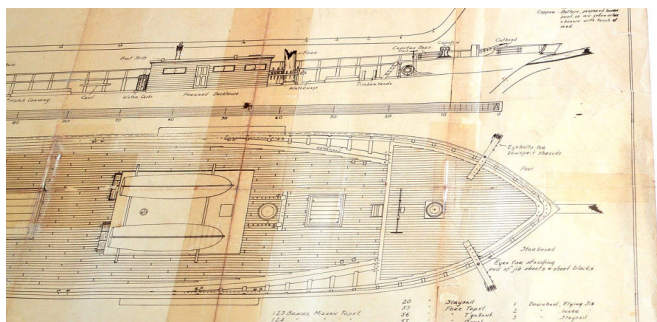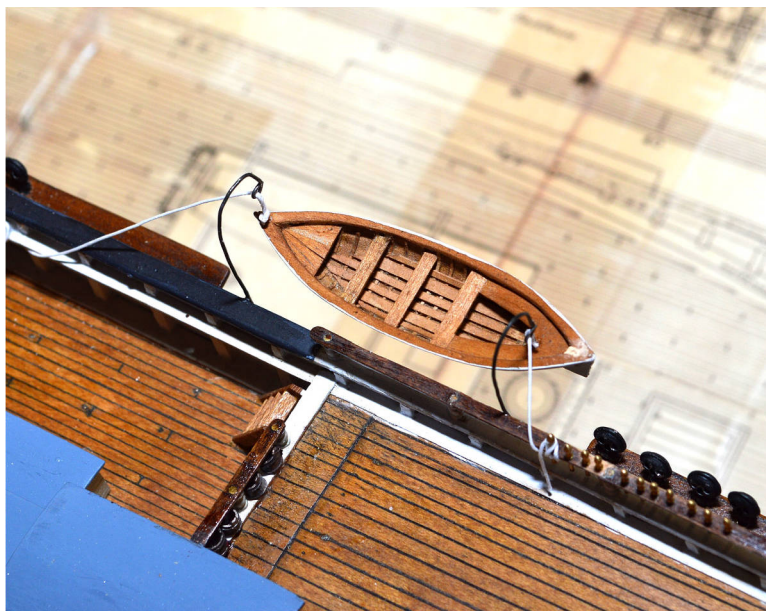
**SHOW
AND TELL**

Leon (1880) — Doug McKenzie

This is the second time that Doug has brought in *Leon*. Progress to this point is the installation of hull planking. Doug noted that coming to the meetings has encouraged him in building this model. He redid the rails and stanchions because he wasn't happy that they were not particularly uniform. Doug is continuing with his research to obtain as much information as he can about the ship's interior. A good-looking job, Doug.
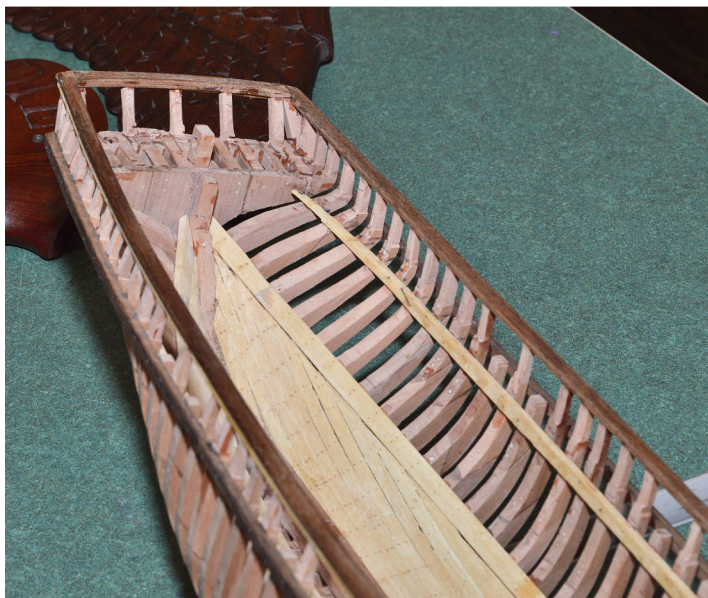
**SHOW
AND TELL**

Slava Class — Don Otis

The Russian cruiser Don brought was originally named the *Slava*, built in 1987. She was renamed the *Moskva* and is still in service, lately reactivated for use in the Syrian Civil War. The model started with the hull of the Kirov that Don significantly kit bashed; the rest is scratch built. This ship is nuclear capable. The numerous antennas shown were for communication in the pre-satellite era. Don wrote an article on this model and its build that was published in the *Ships in Scale*. Good looking model, Don.
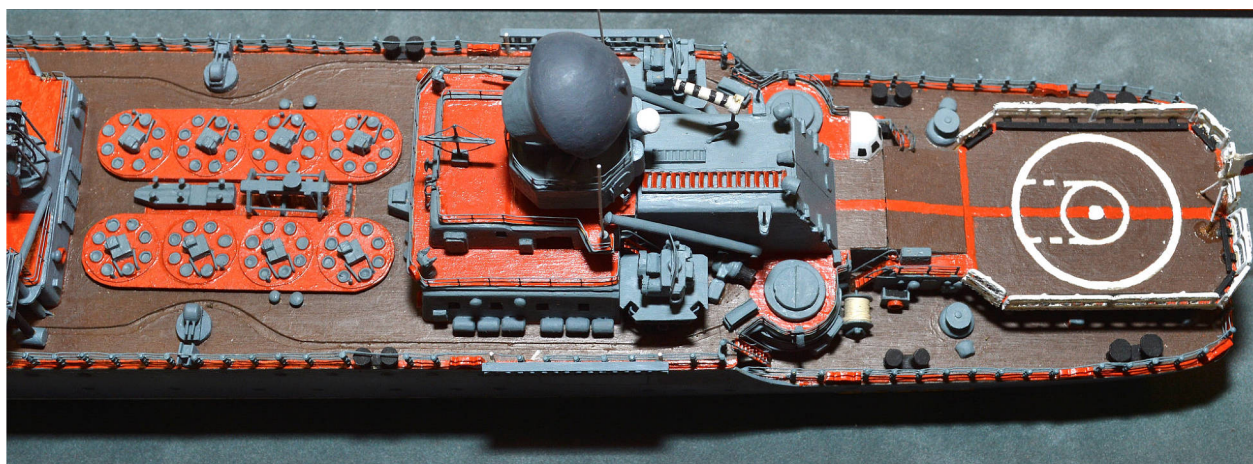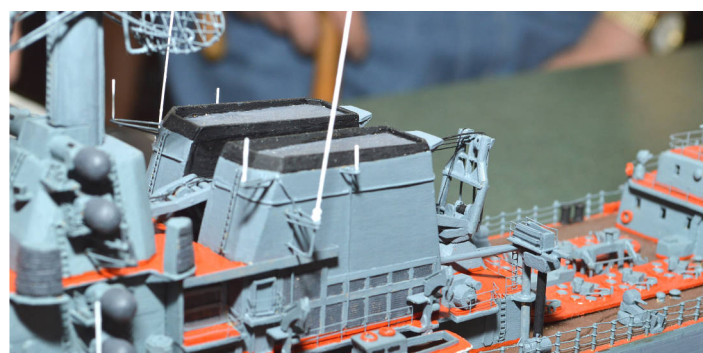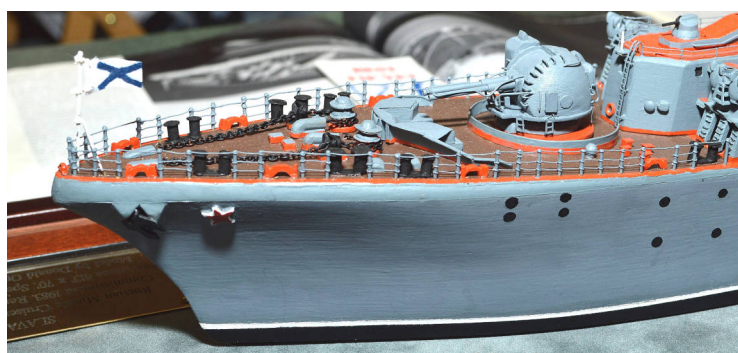
SHOW AND TELL

Picket Boat #1 — Ossi Thalmann

This is the Model Shipways kit that Ossi bought at one of our auctions. *Union Picket Boat No. 1* sank the ironclad CSS *Albemarle* during the Civil War with a spar torpedo. Ossi reported that it is different from the models he usually builds in that the only operational feature is the prop. He mentioned that it was a very simple and quick build as all the pieces and parts fit well. The model is extremely clean, has an authentic finish and is very neatly done. Ossi's model received a second place award in Manitowoc this year. A beautiful job, Ossi.
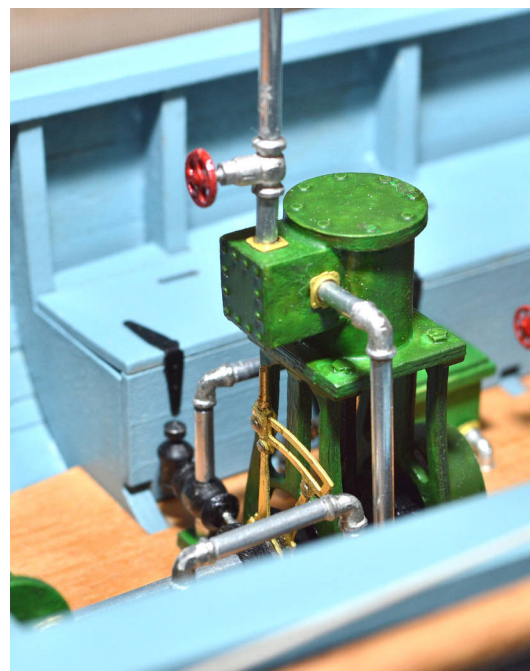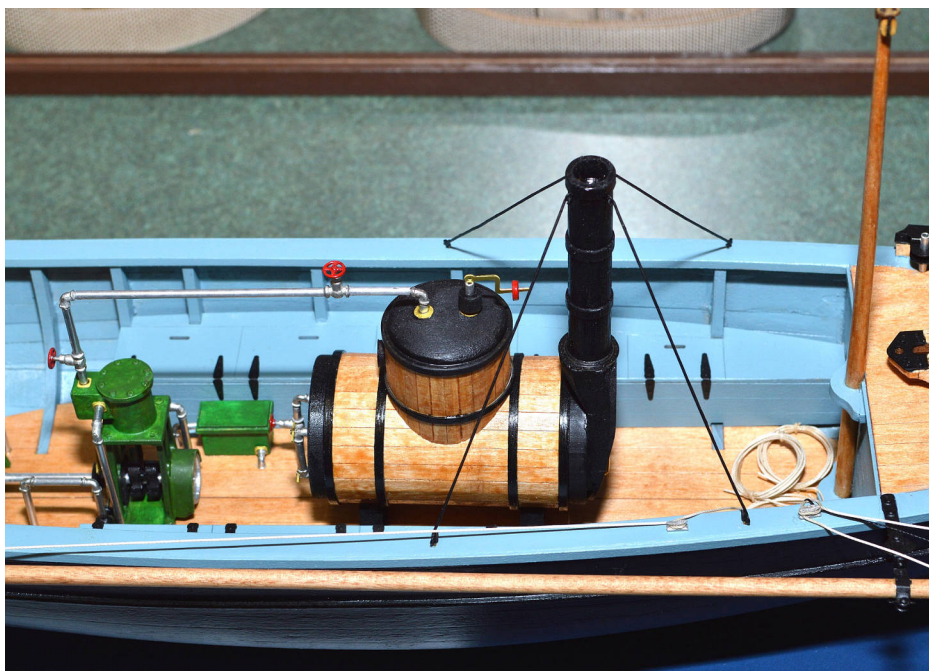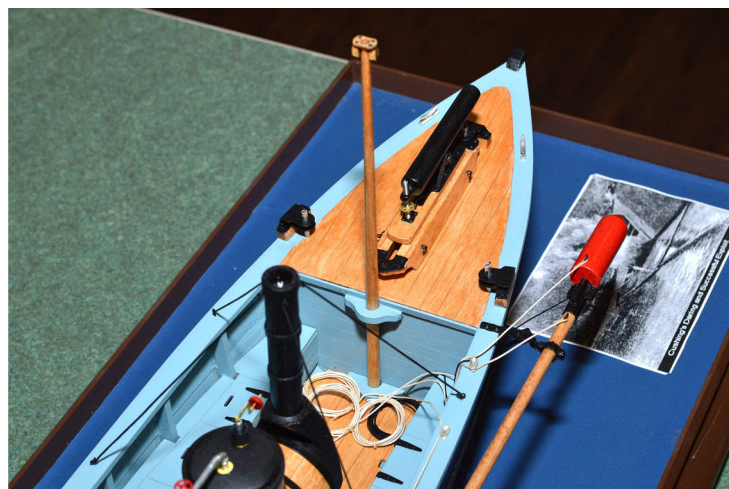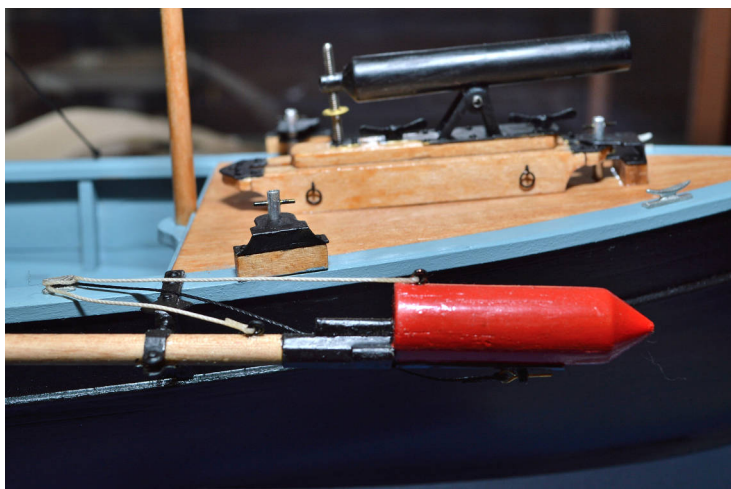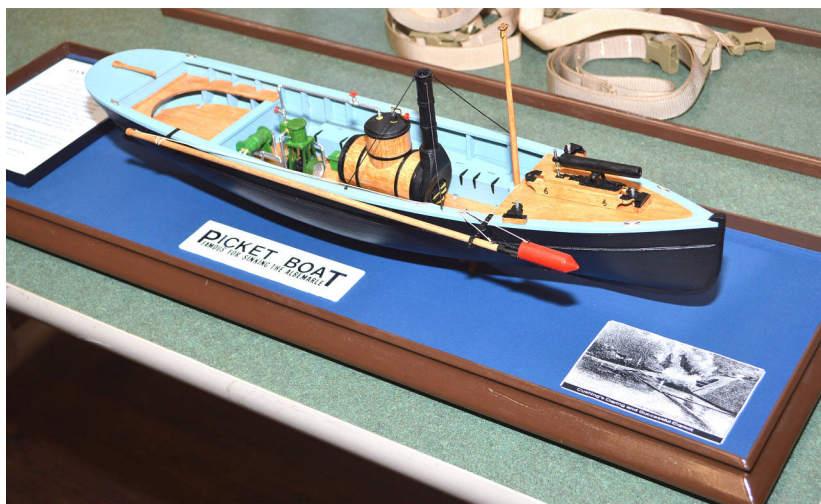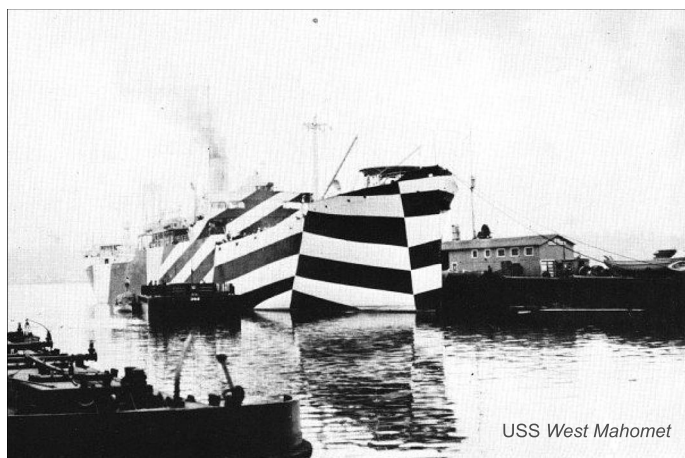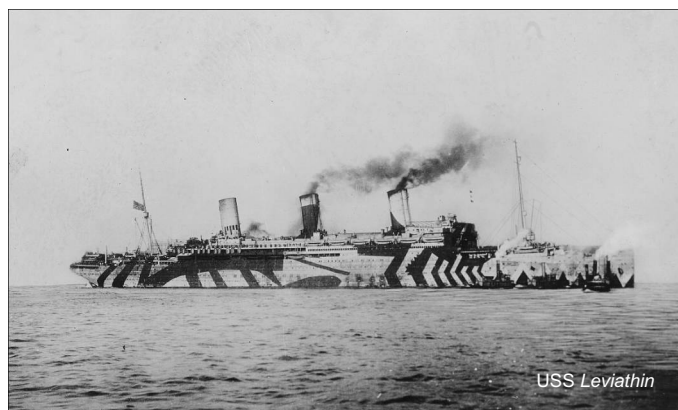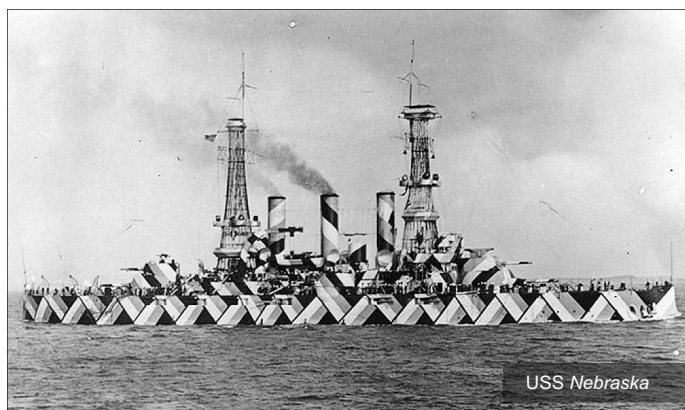
CAMOUFLAGE
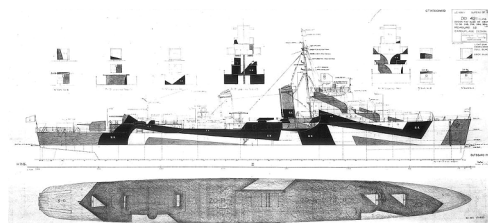
Ed Note: When it comes to modeling, I have always had a particular interest in ships from the period 1920-1945. Many years ago, I ordered a book on ship camouflage and was surprised to learn that the external paints used for US Navy ships during WWII were not neutral gray (as I had always thought), but had a distinctly purple-blue tint. This started an interest that, off and on, has been a pursuit of mine for more than 30 years. The following article is offered as a matter of general information to all, and particularly to those who will be building models of US Navy ships that served during WWII. While the chips below are quite close to the original colors (as best I can make out on my monitor), each electronic viewing device is different. For the most accurate representation, I recommend ordering paint chip cards from Snyder and Short. Click here.

At the outbreak of World War I, combatants struggled to find ways to conceal their ships from the prying eyes of enemy submarines and surface warships. The British were the first to experiment with dazzle patterns in multiple shades and colors painted on the sides of their vessels. The paint schemes were designed not to completely hide the ships but rather to confuse observers and make it more difficult to establish the size, course, speed and range of a targeted vessel. The effectiveness of dazzle camouflage was difficult to document, however, and in the absence of clear evidence, the concept was largely dropped after the war. Below are examples of patterns that were applied during WWI.

USS *Nebraska*

USS *Leviathin*
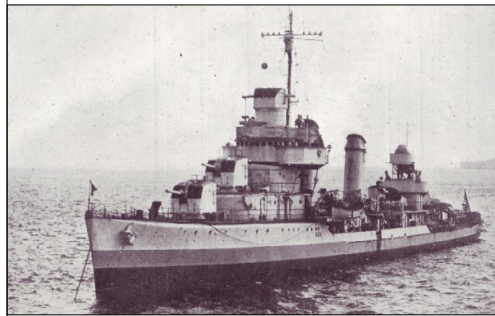

USS *West Mahomet*

HMS *Argus*

CAMOUFLAGE

In 1935, the US Naval Research Laboratory resumed interest in camouflage and began studies and tests on low visibility ship patterns and colors. With the likelihood of the United States entering World War II, and after experiments with various paint schemes conducted during the 1940 fleet exercise, the Bureau of Ships (BuShips) in January 1941 issued *Ship Camouflage Instructions* (SHIPS-2), laying out 9 painting schemes to be used throughout the Navy. The adoption of the new measures was very slow, however. As of late May '41, the Navy's paint factories had yet to receive the ingredients needed for the new paints; in mid-April they had not even received the lampblack required for converting existing paint supplies to the new standards.

Dull Black	Dark Gray	Ocean Gray (Early)	Light Gray (Early)

Name	Description	Image
Measure 1	Dark Gray (5-D) overall except for Light Gray (5-L) structures above the stack tops. Steel horizontal surfaces were Dark Gray; wooden decks were left bare, except for aircraft carriers which continued to use Mahogany Red stain on flight decks. Measure 1 was to be the default paint scheme for the entire Navy in the absence of other instructions. Measure 1A was an experimental scheme in overall Sea Blue, later adopted as Measure 11. Measure 1B was another experimental scheme using overall Sapphire Blue (see photo of USS *Drayton* below). Measure 1C similarly used Navy Blue, later adopted as Measure 21.	 USS *North Carolina* wearing Measure 1, May 1941
Measure 2	A graded system wherein the hull was painted in approximately equal bands of Dark Gray, Ocean Gray (5-O) and Light Gray, with all vertical superstructure surfaces painted Light Gray as well. Horizontal surfaces were as Measure 1, Dark Gray except for wooden decks. This measure was also widely used by the Royal Navy where it became known as the emergency scheme, or Admiralty alternative scheme, when there was insufficient time or where required pigments were unavailable to apply an Admiralty disruptive scheme.	 USS *Charles F. Hughes* wearing Measure 2
Measure 3	Light Gray overall similar to the Navy's interwar peacetime scheme (Light Gray was very similar to prewar Standard Navy Gray), and to the Royal Navy peacetime Mediterranean Fleet paint scheme. Horizontal surfaces as Measures 1 and 2.	

Name	Description	Image
Measure 4	Destroyer Measure 4 was black overall, except for Light Gray above the stack tops. This was intended for destroyer night operations but it was found that even on very dark nights, black ships were more noticeable than gray ones. Measure 4 was also worn briefly by the aircraft carriers *Ranger* and *Wasp*.	 USS *Conyngham* wearing Measure 4
Measure 5	A painted white bow wave used in combination with Measure 1, 2 or 3 to give the impression of high speed at all times	 USS *Northampton* wearing Measure 5 (fake bow wave) with Measure 1
Measure 6	Cruiser Measure 6 made a *Brooklyn* or *St. Louis*-class cruiser resemble a *New Orleans*-class cruiser, by painting a *New Orleans* silhouette on both sides: Light Gray on a Measure 1 ship or Dark Gray on a Measure 2 or 3 ship.	
Measure 7	Measure 7 was similar to Measure 6. Cruiser Measure 7 made an *Omaha*-class cruiser resemble a *Clemson*-class destroyer.	
Measure 8	Similar to Measures 6 and 7, Cruiser Measure 8 made a *Brooklyn* or *St. Louis*-class cruiser resemble a two-funnel destroyer. This scheme was discontinued after causing station-keeping confusion among ships operating in formation.	 USS *Minneapolis* wearing a variant of Measure 8, 1943
Measure 9	Submarine Measure 9 was Dull Black (#82) overall and is still in use.	

CAMOUFLAGE

By the summer of 1941 it had become apparent that Dark Gray (5-D) was unacceptably visible under all conditions, and the "conversion" 5-D made from prewar #5 was also too glossy and prone to chipping and peeling; meanwhile Pacific Fleet experiments with new colors Sea Blue and Sapphire Blue were deemed successful. Accordingly, in July/August, Dark Gray was discontinued and new paint formulas Sea Blue (5-S) and Haze Gray (5-H) were implemented, together with Deck Blue (20-B) for all horizontals, steel and wood alike. The tinting paste was altered to contain somewhat less black and more blue than before; this meant that Ocean Gray also became somewhat more bluish in cast at this time and all the 5-series paint colors now were categorized as Munsell 5 Purple-Blue. Until 1945 all USN "gray" and almost all "blue" shades were produced

using this same blue-black tint (5-TMa), so that the paints represented different tones of what was effectively a single blue-gray hue. In September, Measures 1 through 8 were abolished and four new schemes promulgated in a revised edition of SHIPS-2. On 19 July Measure 12 had been prescribed for the entire Atlantic Fleet, and on 13 September Measure 11 for the Pacific. However, there was considerable time lag between the issuance of new instructions (and paint being manufactured and distributed) and ships actually being repainted; at the time of the Pearl Harbor attack on December 7th, most of the Pacific Fleet was still wearing dark gray Measure 1. In November aircraft carriers began applying a dark blue-gray flight deck stain (#250) approximately the same color as Deck Blue, together with a stain approximately Ocean Gray for flight deck markings (#251).

Sea Blue	Ocean Gray	Haze Gray	Deck Blue

Name	Description	Image
Measure 11	Sea Blue (5-S) overall, with horizontal surfaces (including wooden portions) painted Deck Blue (20-B). All visible canvas boat covers, tarpaulins and windscreens to be dyed in a color to match Deck Blue. It was used in the Pacific and Mediterranean for concealment from aircraft. Royal Navy submarines operating in the Mediterranean used a similar scheme. During the Battle of the Coral Sea and the Battle of Midway, ships wearing Measure 11 came under attack less often than ships wearing Measure 12.	USS *Drayton* in summer 1941 wearing experimental Measure 1B (note the light gray 5-L on the mast above the funnel and director), a precursor of Measure 11
Measure 12	Sea Blue on the hull up to the main deck (hangar deck on aircraft carriers), Ocean Gray from main deck level to the top of the superstructure masses, and Haze Gray (5-H) for masts and other vertical projections above superstructure level. Horizontal surfaces painted Deck Blue. Canvas dyed blue. Sea Blue was later darkened to Navy Blue (Measure 12A). It was found to be ineffective against aerial observation during the early carrier aircraft battles of Coral Sea and Midway, so all-blue Measure 11 and its replacement Measure 21 became preferred in the Pacific.	

CAMOUFLAGE

Name	Description	Image
Measure 12 (Modified)	In Measure 12 (Modified), irregular patches or splotches were added to break up the ship's profile: Haze Gray splotches on Sea Blue (later Navy Blue) and vice versa, and Sea Blue (later Navy Blue) splotches on Ocean Gray. "These splotches should be obtained by extending the Navy Blue paint into the designated Ocean Gray paint area and vice versa. They should be about 1/3 the area of a rectangle 12 feet high by 20 feet long." There were no specific instructions on the positioning or shape of the splotches, which were left up to individual captains, yards or maintenance facilities, and the recommended size was frequently disregarded, so that no two ships looked alike. Measure 12 (Mod) was used extensively in both fleets during 1942. Unfortunately the splotches in most cases were too small to break up the ship's outline effectively, and at any distance resolved into simple gray.	 USS *Buchanan* wearing Measure 12 (Modified) USS *Alabama* wearing measure 12 (Modified)
Measure 13	Haze Gray (5-H) overall, with horizontal surfaces Deck Blue. This was the least used solid color measure during World War II. "Low visibility to surface observers in hazy or foggy weather especially when it is accompanied with periods of weak sunlight... Useful in submarine infested areas, where periscopic observers will see a vessel entirely against a sky background. High visibility under searchlight, and down-moon at close ranges. Very low visibility on moonless nights and at twilight." Measure 13 was found to provide reasonable protection in the widest range of conditions, and became a standard paint scheme after the war under assumed conditions of radar observation, with Deck Gray substituted for Deck Blue.	
Measure 14	Ocean Gray overall. Used on many small craft, including minesweepers, PTs, SCs, PCS, and some Coast Guard vessels as well as several escort carriers (CVEs) throughout 1942, 1943, and 1944. "Useful for Protection against Submarine attack, where aerial observation is a lesser factor... In Atlantic or Pacific Coastal waters where weather is generally sunny, visibility is high, and bright moonlight is common at night."	

Asiatic Fleet: The Asiatic Fleet, based in distant Manila, was unable to obtain the new paint colors, and so, in November painted its ships overall in a color procured from local sources midway between Sea Blue and Ocean Gray, dubbed "Cavite Blue."

Next Month: **Camouflage Part 2 — Improved Measures from Combat Experience**

— *Data and photos for this article from Wikipedia*

Club Officers